Service Manual

Pioneer

ORDER NO.
RRV2454

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-D510
VSX-D510-G

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model			Power Requirement	The voltage can be converted by the following method.
	VSX-D510	VSX-D510S-G	VSX-D510-G		
SDPWXJI	◯	–	–	AC110V/120-127V/220V/240V	With the voltage selector
BXJI	–	◯	–	AC110V/120-127V/220V/240V	With the voltage selector
HLXJI	–	–	◯	AC220-230V	AC240V, ✻

✻ : Alter the wiring of the Power-supply block at the primary winding of Power-transformer referring to the "Line Voltage Selection" described in this Manual.

● This service manual should be used together with the following manual(s):

Model No.	Order No.	Remarks
VSX-D510/KUXJI	RRV2426	

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1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *Reference Nos. indicate the pages and Nos. in the service manual for the base model.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 → 56 x 10^1 → 561 ..... RD1/4PU 5 6 1 J
47k → 47 x 10^3 → 473 ..... RD1/4PU 4 7 3 J
0.5 → R50 ..... RN2H R 5 0 K
1 → 1R0 ..... RS1P 1 R 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k → 562 x 10^1 → 5621 ..... RN1/4PC 5 6 2 1 F

■ CONTRAST TABLE

VSX-D510/SDPWXJI, VSX-D510-G/BXJI, HLXJI and VSX-D510/KUXJI are constructed the same except for the following :

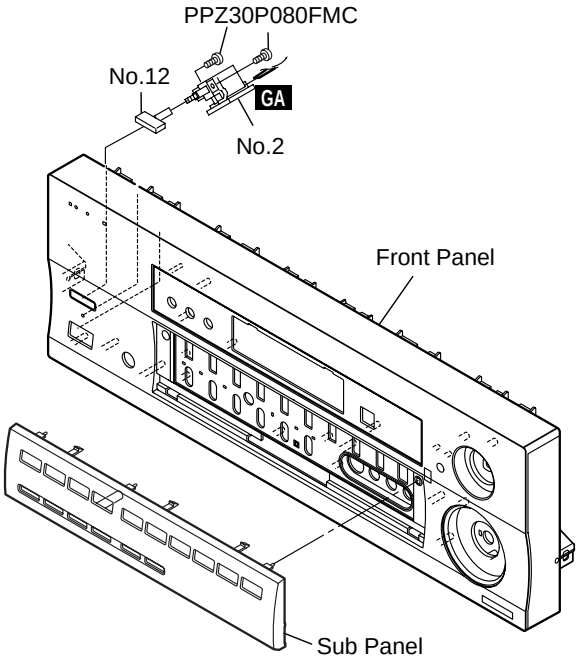
Ref. No.	Mark	Symbol and Description	Part No.				Remarks
			VSX-D510 /KUXJI	VSX-D510 /SDPWXJI	VSX-D510-G /BXJI	VSX-D510-G /HLXJI	
		PCB ASSEMBLIES					
	NSP	AMP&PS ASSY	XWK3015	XWK3017	XWK3017	XWK3018	
P5- 3		├ AMP INPUT ASSY	AWX7382	XWZ3387	XWZ3387	XWZ3387	
P5- 4		├ AMP&PRIMARY ASSY	XWZ3372	XWZ3374	XWZ3374	XWZ3375	
P5- 5		├ REGULATOR ASSY	AWX7493	XWZ3384	XWZ3384	XWZ3384	
P5- 6		├ TRANS 2 ASSY	AWX7468	XWZ3403	XWZ3403	XWZ3403	
		└ VOLTAGE SELECT SW ASSY	Not used	XWZ3393	XWZ3393	Not used	No. 1
	NSP	COMPLEX ASSY	XWK3001	XWK3003	XWK3003	XWK3004	
P7- 1		├ FRONT ASSY	XWZ3336	XWZ3338	XWZ3338	XWZ3339	
		├ MECHA SW ASSY	Not used	XWZ3358	XWZ3358	XWZ3358	No. 2
		└ TRANS 4 ASSY	Not used	XWZ3369	XWZ3369	XWZ3369	No. 3
		PACKING SECTION					
P3- 4	NSP	Warranty Card	ARY7045	Not used	Not used	Not used	
P3-11		Packing Case	XHD3145	XHD3153	XHD3155	XHD3154	
P3-12		Operating Instructions (English)	XRB3002	Not used	Not used	Not used	
P3-12		Operating Instructions (English/Spanish/Chinese)	Not used	XRB3037	XRB3037	XRB3037	
		Caution 220V Label	Not used	ARR1003	ARR1003	Not used	
	⚠	AC Plug Adapter	Not used	Not used	AKX7011	Not used	Accessories
		EXTERIOR SECTION					
P5- 7		FM/AM TUNER Unit	AXX7046	AXX7047	AXX7047	AXX7047	
P5-10	⚠	Power Transformer (AC120V)	XTS3043	Not used	Not used	Not used	
P5-10	⚠	Power Transformer (AC220-230V)	Not used	Not used	Not used	XTS3046	
P5-10	⚠	Power Transformer (AC110V/120-127V/220V/240V)	Not used	XTS3048	XTS3048	Not used	
P5-11	⚠	Fuse (FU1 : 10A/120V)	REK1087	Not used	Not used	Not used	
P5-11	⚠	Fuse (FU1 : T2.5A/250V)	Not used	Not used	Not used	REK1026	
P5-11	⚠	Fuse (FU1 : T6.3A/250V)	Not used	REK1030	REK1030	Not used	
P5-18		Strain Relief	CM-22C	AEC7317	AEC7317	CM-22B	
P5-19	⚠	AC Power Cord	VDG1075	XDG3010	XDG3010	VDG1077	
P5-20	⚠	Fuse (FU2 : 8A/120V)	REK1086	Not used	Not used	Not used	
P5-22		Push Rivet	AEC7025	Not used	Not used	Not used	
P5-24		Rear Panel	XNC3074	XNC3082	XNC3082	XNC3083	
P5-25		Bonnet Case	XZN3111	XZN3112	XZN3114	XZN3114	

Ref. No.	Mark	Symbol and Description	Part No.				Remarks
			VSX-D510 /KUXJI	VSX-D510 /SDPWXJI	VSX-D510-G /BXJI	VSX-D510-G /HLXJI	
P5-30	NSP	Heat Sink 0.4	ANH7109	XNH3022	XNH3022	XNH3022	
P5-31		Top Cover	XME3004	Not used	Not used	Not used	
P5-33		Rubber Sheet	AEB1111	AEB1111	Not used	Not used	
P5-35	NSP	Fuse Card	AAX7096	XAX3218	XAX3218	AAX7277	
	NSP	Fuse Card	Not used	AAX7277	AAX7277	Not used	No. 4
		Insulator (Front side)	Not used	Not used	PNW2766	PNW2766	No. 5
	⚠	Fuse (FU2, FU3 : T2.5A/250V)	Not used	REK1026	REK1026	Not used	No. 6
	⚠	Voltage Selector	Not used	AKX-507	AKX-507	Not used	No. 7
		F.F.C(J22:3P/30V)	Not used	XDD3061	XDD3061	XDD3061	No. 8
		Fan Motor	Not used	XXM3002	XXM3002	XXM3002	No. 9
		Fan Holder R4	Not used	XNG3040	XNG3040	XNG3040	No.10
		Heat Sink Assy	Not used	XNH3023	XNH3023	XNH3023	No.11
		FRONT PANEL SECTION					
P7- 6		Front Panel	XMB3029	XMB3038	XMB3030	XMB3030	
P7- 7		Sub Button	XAD3068	XAD3068	XAD3069	XAD3069	
P7- 9		Name Plate	PAM1776	PAM1776	PAM1779	PAM1779	
P7-11		Select Knob	XAB3008	XAB3008	XAB3009	XAB3009	
P7-12		Volume Knob	XAB3011	XAB3011	XAB3012	XAB3012	
P7-13		Power Button	XAD3062	XAD3062	XAD3063	XAD3063	
		Power Button MG	Not used	AAD7442	AAD7491	AAD7491	No.12
P7-14		Sub Panel	XAK3169	XAK3169	XAK3170	XAK3170	
P7-15		Jog Button	XAD3065	XAD3065	XAD3066	XAD3066	
P7-18		Diplay Panel	XAK3172	XAK3172	XAK3186	XAK3186	

Notes : ●The numbers in the remarks column correspond to the numbers on the " EXPLODED VIEWS ".
● For PCB ASSEMBLIES, Refer to "CONTRAST OF PCB ASSEMBLIES", "PCB PARTS LIST", "2. SCHEMATIC DIAGRAM" and "3. PCB CONNECTION DIAGRAM".

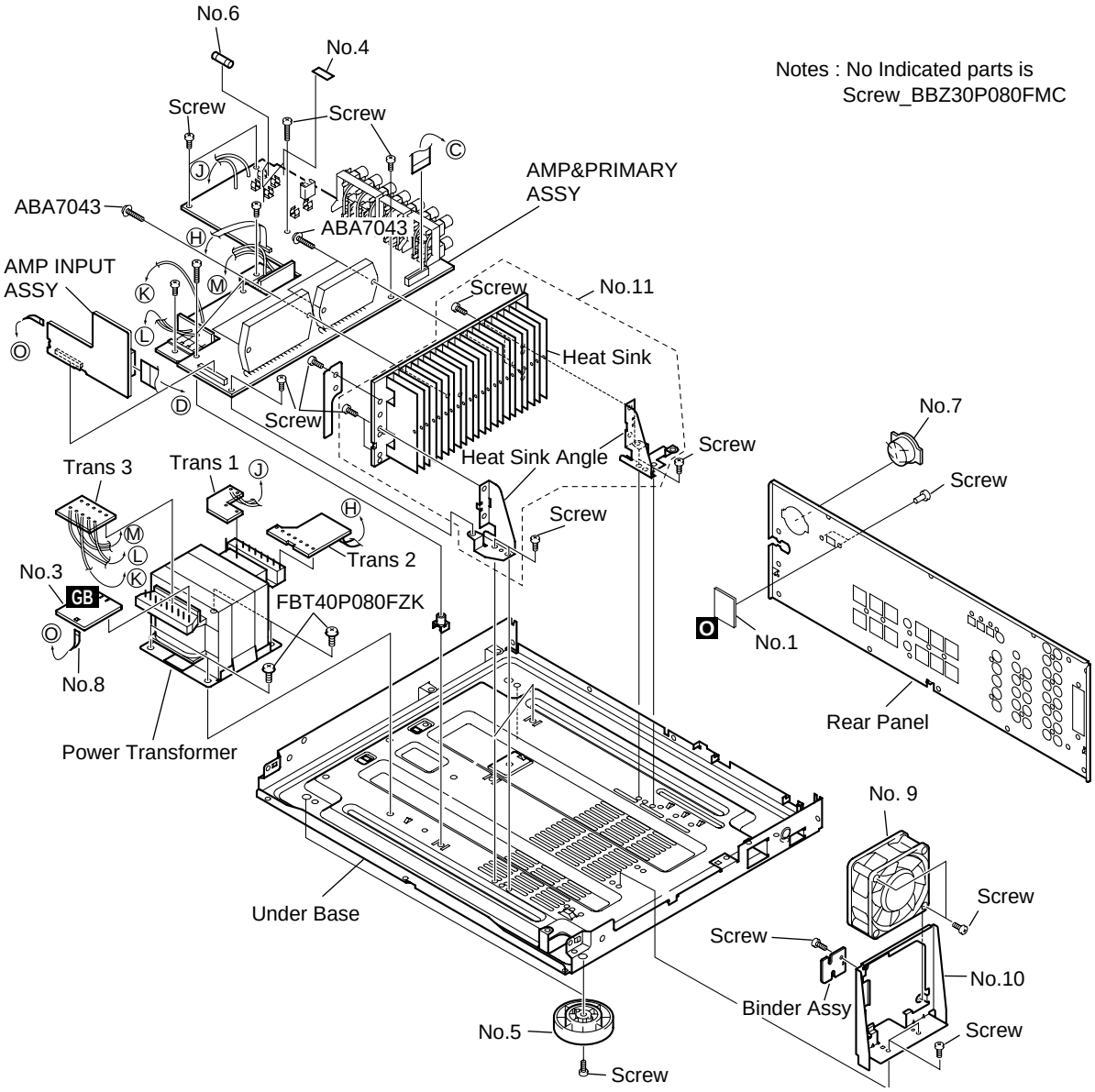
■ EXPLODED VIEWS

● FRONT PANEL SECTION



■ EXPLODED VIEWS

● EXTERIOR SECTION



■ CONTRAST OF PCB ASSEMBLIES

BF AMP&PRIMARY ASSY

XWZ3374, XWZ3375 and XWZ3372 are constructed the same except for the following :

Mark	Symbol and Description	Part No.			Remarks
		XWZ3372	XWZ3374	XWZ3375	
⚠	IC701, IC702 (125mA)	AEK7020	Not used	Not used	
⚠	IC52 (315mA)	Not used	AEK7003	AEK7003	
	Q701	2SC4793	2SD1859X	2SD1859X	
	Q702	2SA1837	2SB1238X	2SB1238X	
	D605, D605, D633, D634	MTZJ16A-T	MTZJ8.2A	MTZJ8.2A	
⚠	D721, D722, D723, D724	Not used	S5688G-T	S5688G-T	
	D751, D755, D757	Not used	1SS133	1SS133	
	D754	1SS133	Not used	Not used	
⚠	T51 STANDBY TRANSFORMER	ATT7057	ATT7038	ATT7037	
	C613, C614, C637, C663, C664	Not used	Not used	CCCSL101J50	
	C701, C702	ACH7137	ACH7137	ACH7134	
	C751, C752, C755, C761, C762	CFTYA104J50	CFTYA224J50	CFTYA224J50	
	C753, C754, C756, C763, C764	Not used	CFTYA224J50	CFTYA224J50	
	C757, C758, C759, C765, C766	Not used	Not used	CQMBA472J50	
	C769, C770	Not used	Not used	CKPUYB102K50	
⚠	R51	RCN1080	Not used	Not used	
⚠	R711	RS2LMF392J	RS2LMF332J	RS2LMF332J	
	R701, R702	RD1/4PU562J	RD1/4PU682J	RD1/4PU682J	
	R703, R704	RD1/4PU183J	RD1/4PU623J	RD1/4PU623J	
	R707, R708	Not Used	RD1/4PU184J	RD1/4PU184J	
	CN751 SPEAKER TERMINAL 6-P	XKE3007	AKE7061	AKE7061	
	CN752 SPEAKER TERMINAL 4-P	XKE3006	XKE3005	XKE3005	
	51 1P AC SOCKET	AKP1060	Not used	Not used	
	52 3P CABLE HOLDER	Not used	51048-0300	51048-0300	
NSP	53 3PI TOP POST	Not used	AKC-081	Not used	
	CN784 10P SOCKET	KP250NA10	KP250NA10	Not used	
	H701, H702 FUSE CLIP	AKR7001	Not used	Not used	
	H53–H56 FUSE CLIP	Not used	AKR7001	Not used	

CF TRANS 2 ASSY

XWZ3403 and AWZ7468 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWZ7468	XWZ3403	
⚠	IC851, IC852 (1.6A)	AEK7012	Not used	
⚠	IC851, IC852 (4A)	Not used	AEK7018	

EF REGULATOR ASSY

XWZ3384 and AWZ7493 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWZ7493	XWZ3384	
⚠	D805– D808	S5688G-T	Not used	

FF AMP INPUT ASSY

XWZ3387 and AWX7382 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWX7382	XWZ3387	
	IC251	Not used	NJM4558D-D	
	Q257	Not used	2SA933S	
	Q251, Q256	Not used	2SC2878	
	Q252	Not used	2SD1858X	
	Q254	Not used	KRA103M	
	Q253, Q255	Not used	KRC103M	
	D251, D252	Not used	1SS133	
	D253	Not used	MTZJ27D	
	D254	Not used	MTZJ5.1B	
	C251	Not used	CEANP470M25	
	C254	Not used	CEAT101M25	
	C252, C253	Not used	CKPUYF103Z25	
	R269	Not used	RD1/4PU102J	
	R251- R255, R258, R259, R262, R266, R268	Not used	RD1/4PU104J	
	R257	Not used	RD1/4PU164J	
	R261	Not used	RD1/4PU222J	
	R265	Not used	RD1/4PU223J	
	R263	Not used	RD1/4PU471J	
	R264, R267	Not used	RD1/4PU472J	
	R260	Not used	RD1/4PU754J	
	CN251 3P CONNECTOR	Not used	52044-0345	
	CN254 17P CONNECTOR	Not used	52044-1745	
	CN252 PLUG 3-P	Not used	KM250MA3L	
	CN253 16P SOCKET	Not used	KP200TA16L	
	CN290 17P CONNECTOR	52044-1745	Not used	
	CN291 16P SOCKET	KP200TA16L	Not used	

KF FRONT ASSY

XWZ3338, XWZ3339 and XWZ3336 are constructed the same except for the following :

Mark	Symbol and Description	Part No.			Remarks
		XWZ3336	XWZ3338	XWZ3339	
	R407	Not used	RS1/16S472J	RS1/16S472J	
	R409	RS1/16S0R0J	Not used	Not used	
	R428	RS1/16S472J	Not used	RS1/16S472J	
	R429	Not used	RS1/16S0R0J	RS1/16S751J	

■ PCB PARTS LIST

Mark	No.	Description	Part No.

GA MECHA ASSY (XWZ3358)

SWITCHES AND RELAYS

	S591		ASG7014

CAPACITORS

	C591, C592		CGSQYF103Z50

OTHERS

	CN591	3P JUMPER CONNECTOR	52151-0310

GB TRANS 4 ASSY (XWZ3369)

SWITCHES AND RELAYS

	IC891,IC892	PROTECTOR(630mA)	AEK7006
	D891		S1WB(A)60SD

CAPACITORS

	C891, C892		CEAT471M35

OTHERS

	CN891	3P CONNECTOR	52045-0345

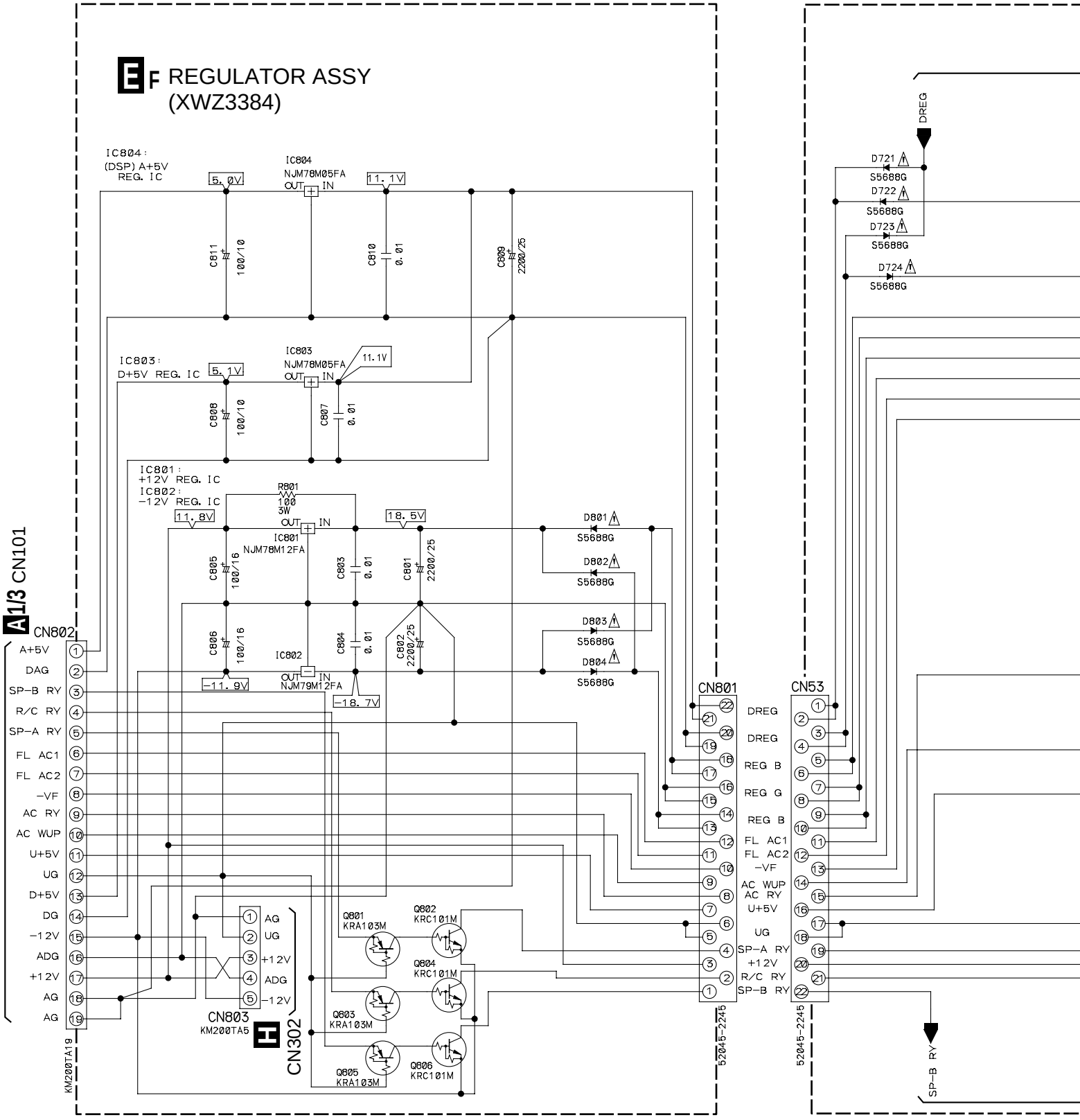
O VOLTAGE SELECT SW ASSY

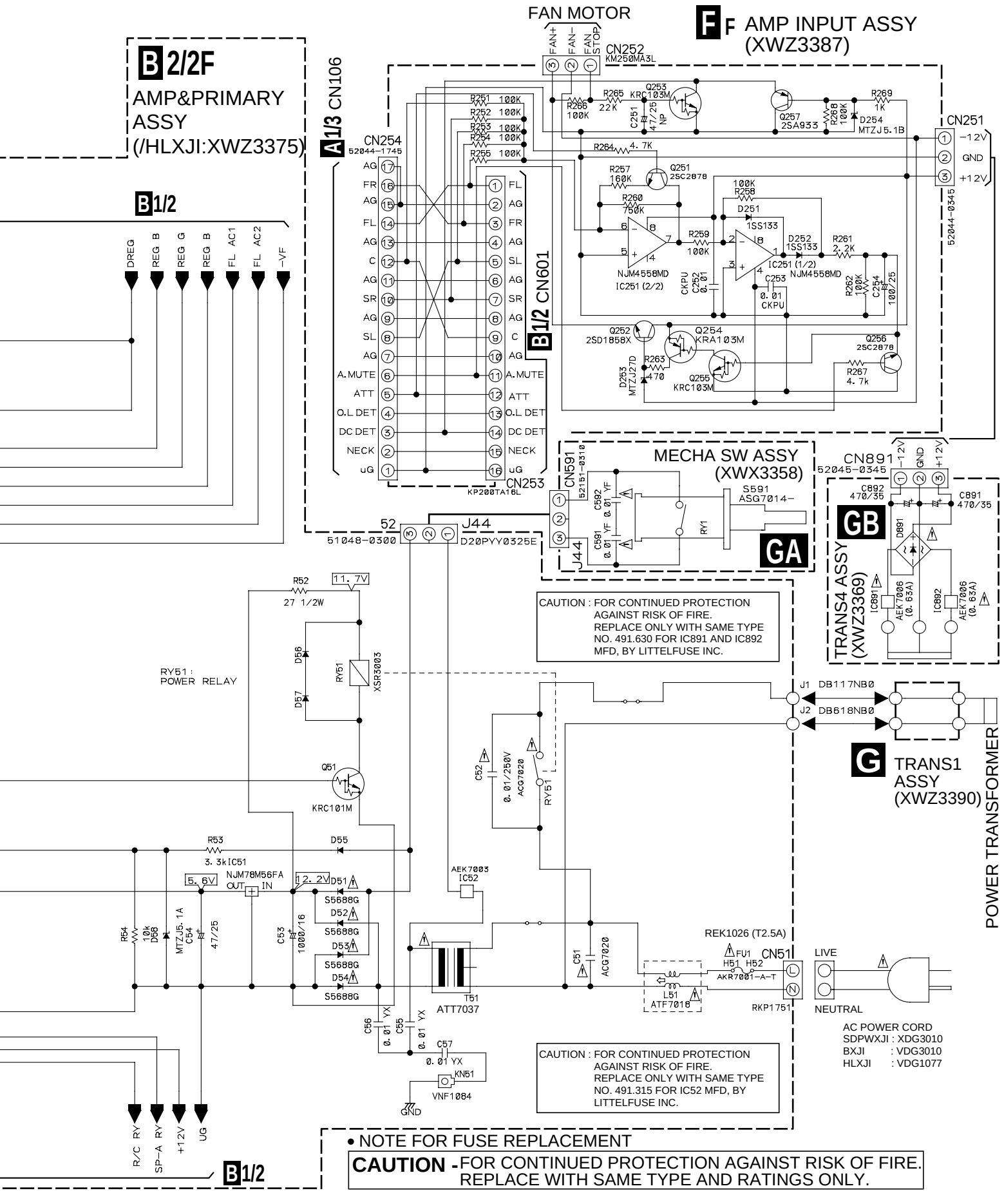
SWITCHES

⚠	S51	VOLTAGE SELECTOR	AKX1033

2. SCHEMATIC DIAGRAM

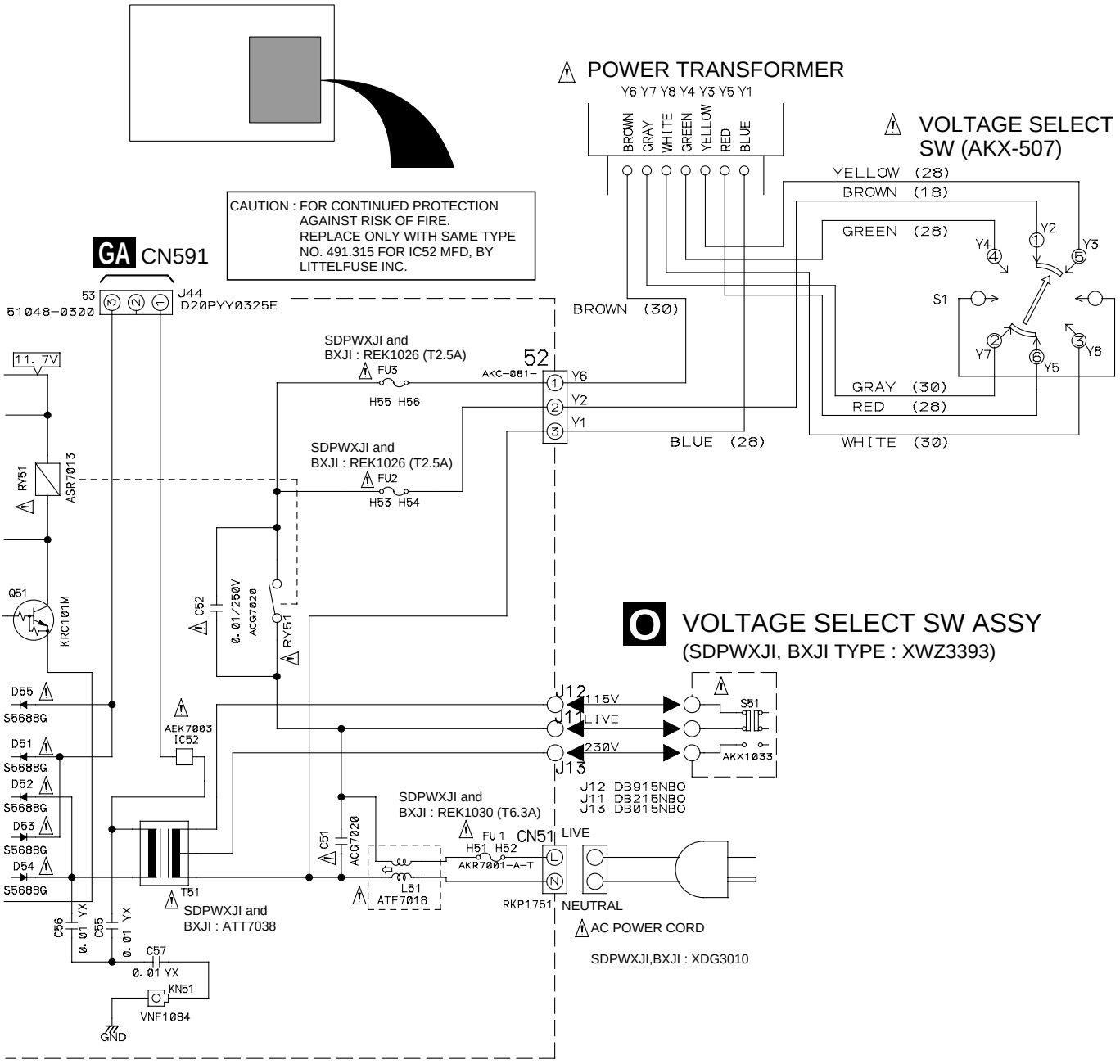
2.1 AMP&PRIMARY (2/2), REGULATOR, AMP INPUT, TRANS1, MECHA SW and TRANS4 ASSYS




B 2/2F
AMP&PRIMARY ASSY (/HLXJI:XWZ3375)
B 1/2
FAN MOTOR
FAN+
FAN−
FAN STOP
CN252
KM250MA3L
F F AMP INPUT ASSY (XWZ3387)
A 1/3 CN106
CN254
52044-1745
B 1/2 CN601
CN253
KP200TA16L
CN251
−12V
GND
+12V
52044-0345
MECHA SW ASSY (XWX3358)
CN591
52151-0310
S591
ASG7014-
J44
52
51048-0300
D20PYY0325E
GA
CN891
52045-0345
GB
TRANS4 ASSY (XWZ3369)
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.630 FOR IC891 AND IC892 MFD, BY LITTELFUSE INC.
RY51 : POWER RELAY
XSR3003
KRC101M
NJM78M56FA
AEK7003
IC52
ATT7037
REK1026 (T2.5A)
CN51
AKR7001-A-T
RKP1751
ATF7018
LIVE
NEUTRAL
AC POWER CORD
SDPWXJI : XDG3010
BXJI : VDG3010
HLXJI : VDG1077
G TRANS1 ASSY (XWZ3390)
POWER TRANSFORMER
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.315 FOR IC52 MFD, BY LITTELFUSE INC.
VNF1084
• NOTE FOR FUSE REPLACEMENT
CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.

2.2 AMP&PRIMARY (2/2) and VOLTAGE SELECT SW ASSYS

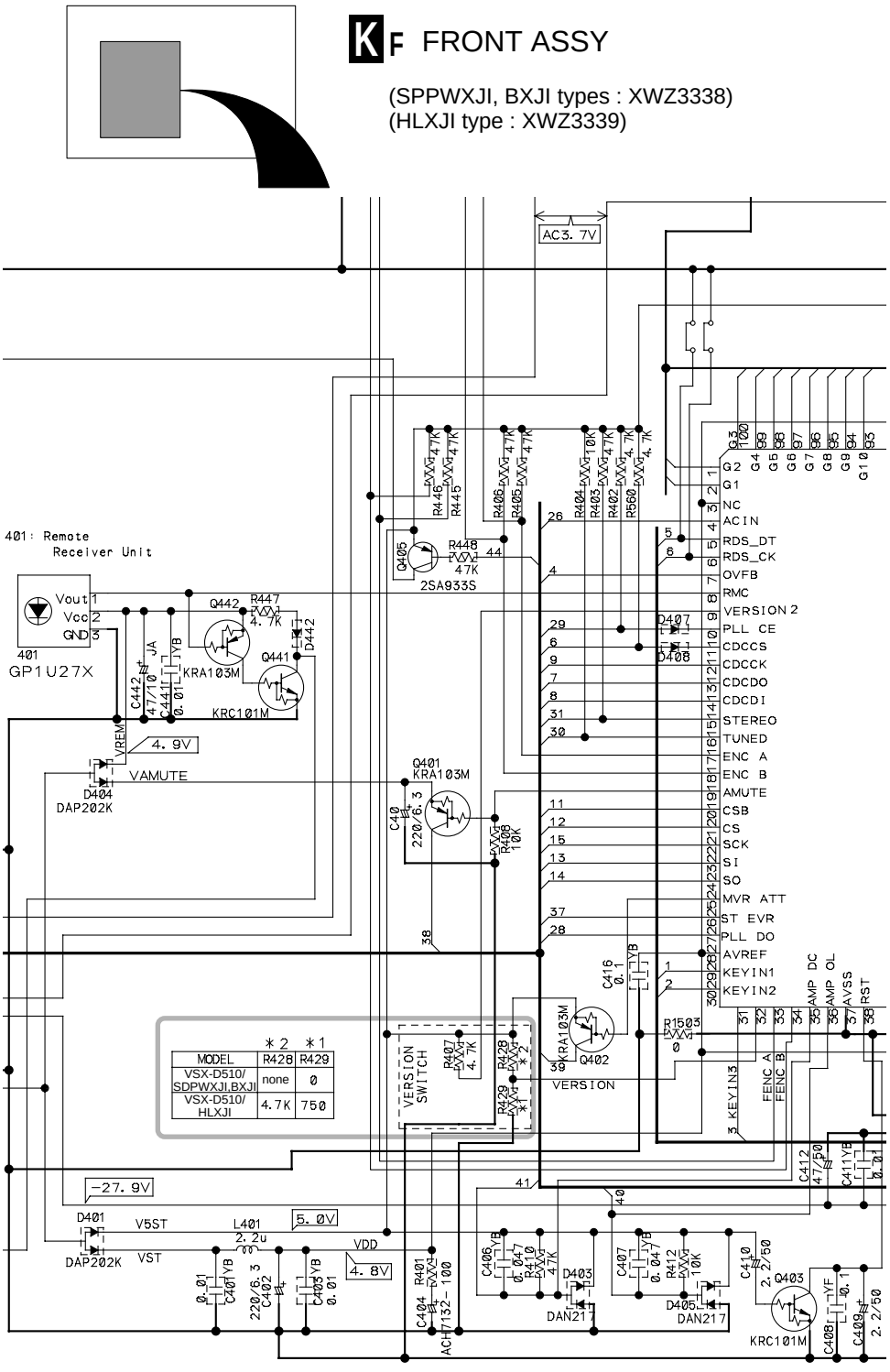
B 2/2F AMP&PRIMARY ASSY (SDPWXJI and BXJI types : XWZ3374)



• NOTE FOR FUSE REPLACEMENT

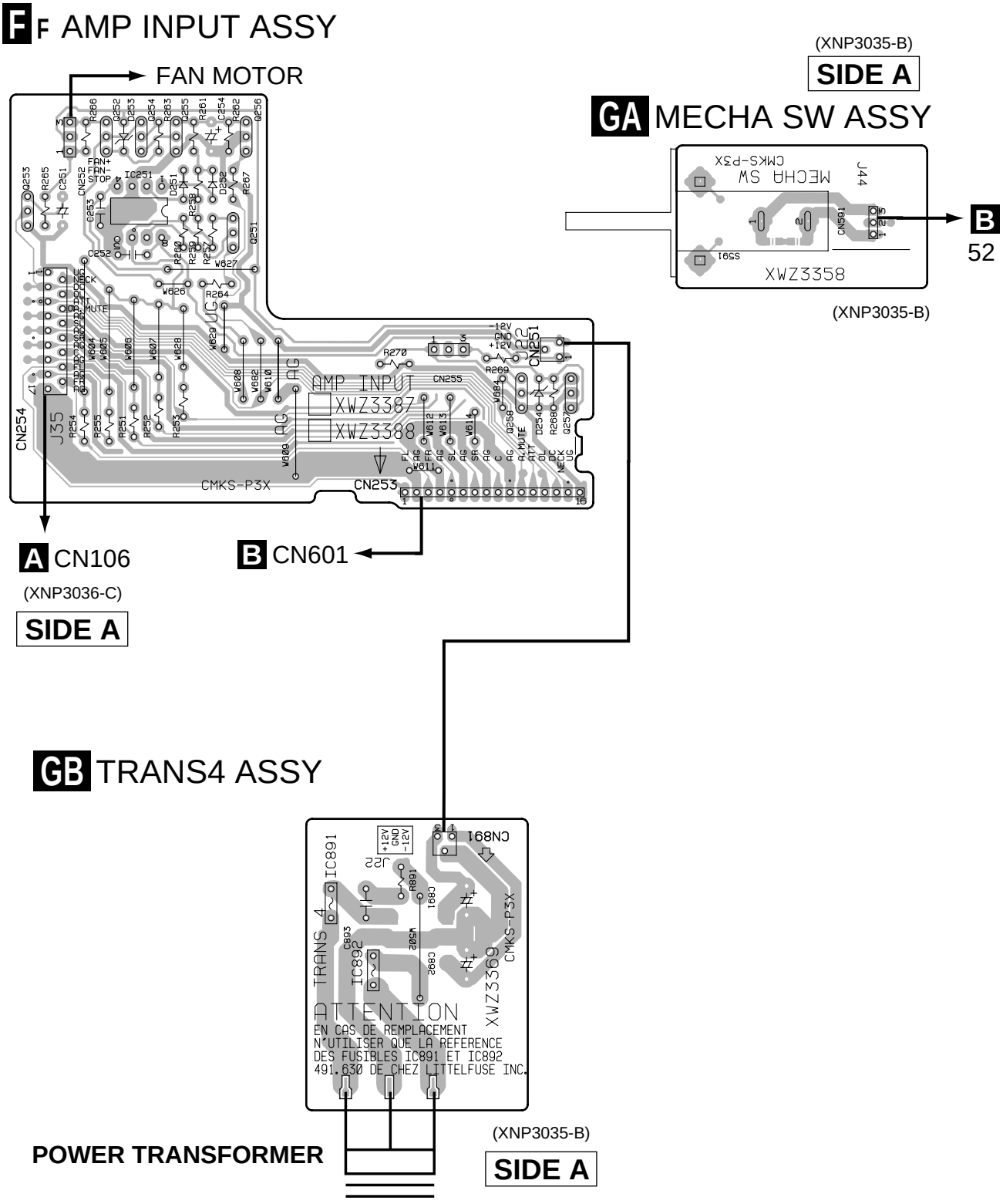
CAUTION -FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.

2.3 FRONT ASSY



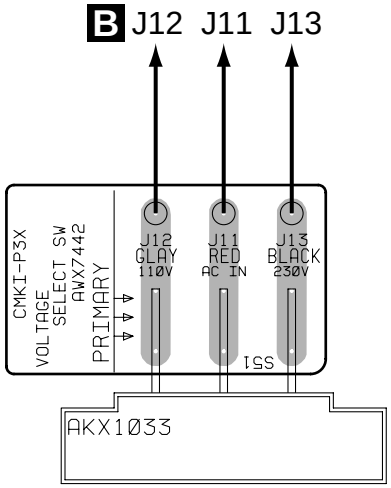
3. PCB CONNECTION DIAGRAM

3.1 AMP INPUT, TRANS4 and MECHA SW ASSYS



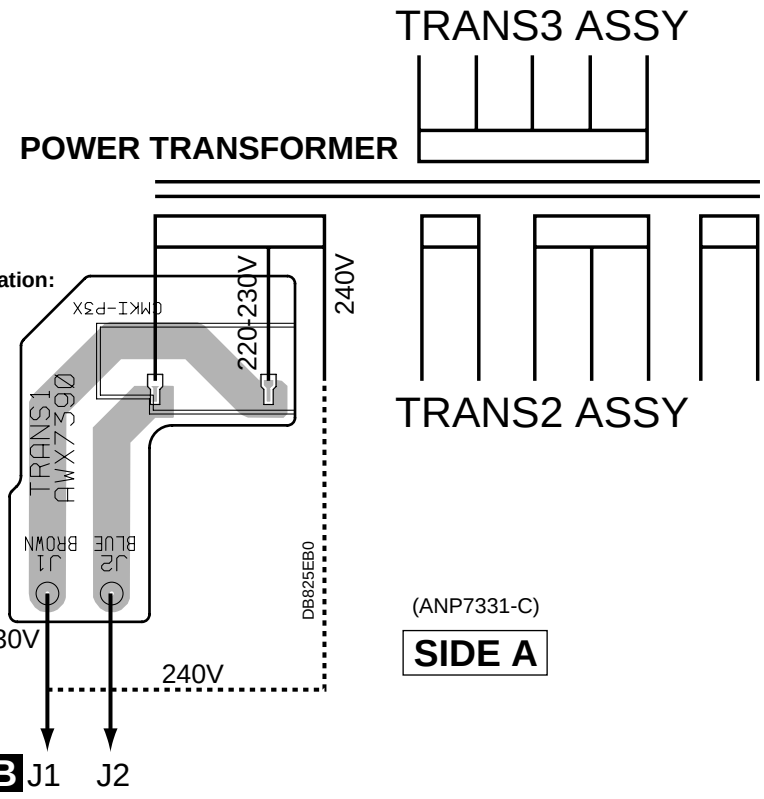
3.2 VOLTAGE SELECT SW and TRANS1 ASSYS

O VOLTAGE SELECT SW ASSY (BXJI and SDPWXJI TYPES ONLY)



(ANP7331-C)

SIDE A



● **Line Voltage Selection**

Line Voltage can be changed by the following modification:

1. Disconnect the AC power cord.
2. Remove the cover.
3. Change the connection wire from TRANS 1 ASSY to AMP&PRIMARY ASSY (Terminal No. J1) as follows.

Voltage	Terminal No.
220-230V	J1 of TRANS 1 ASSY
240V	240V terminal of power transformer

4. Stick a line voltage label on the rear panel.

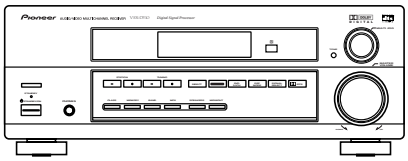
Description	Part No.
220V label	AAX-193
240V label	AAX-192

(ANP7331-C)

SIDE A

G TRANS1 ASSY (HLXJI TYPE ONLY)

Service Manual



ORDER NO.
RRV2426

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-D510

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	Remarks
	VSX-D510		
KUXJI	◯	AC120V	
KCXJI	◯	AC120V	

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1. SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

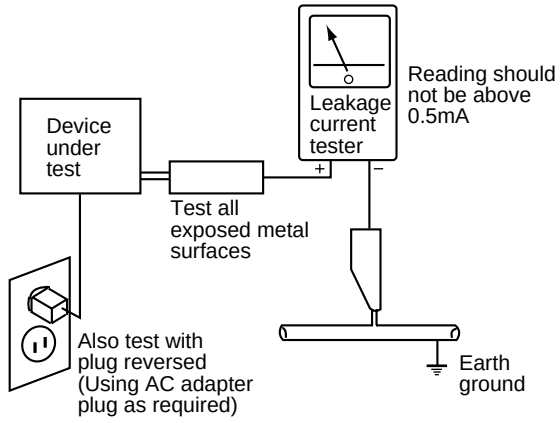
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.


Reading should not be above 0.5mA
Leakage current tester
Device under test
+
–
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

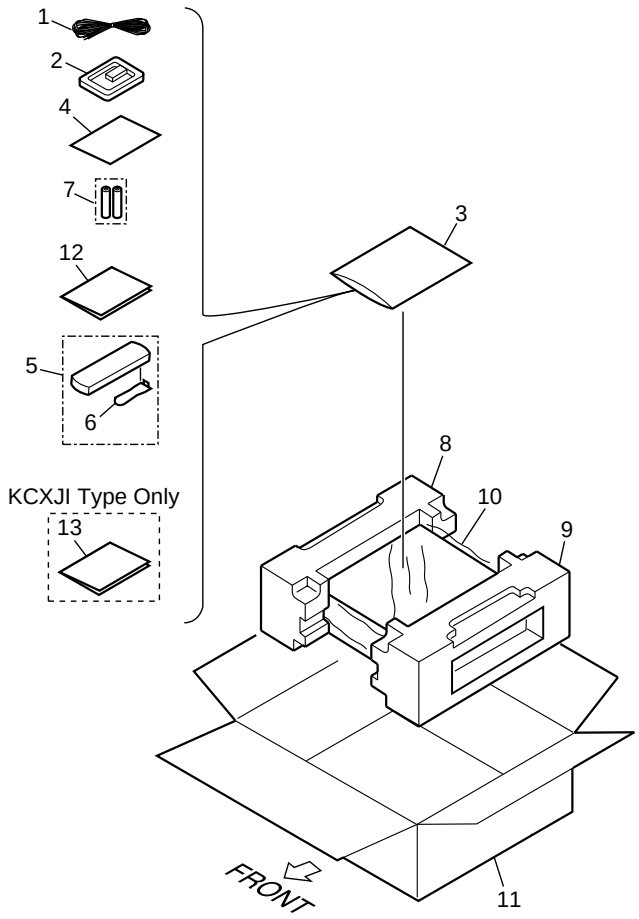
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

2. EXPLODED VIEWS AND PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *Screws adjacent to ▼ mark on the product are used for disassembly.*

2.1 PACKING



(1) PACKING PARTS LIST

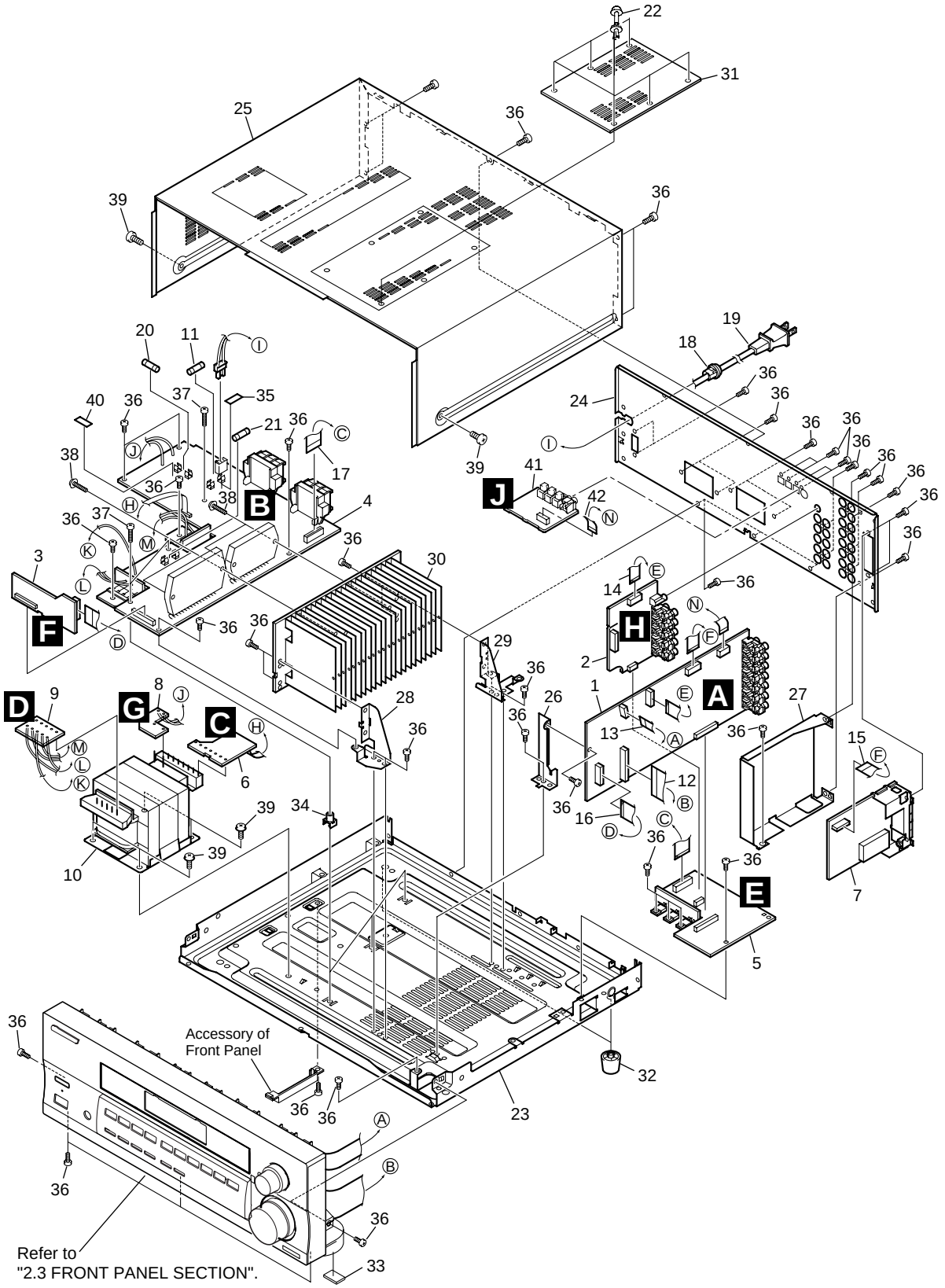
Mark	No.	Description	Part No.
	1	FM Wire Antenna	ADH7004
	2	AM Loop Antenna	ATB7009
	3	Polyethylene Bag (0.03 × 230 × 340)	Z21-038
NSP	4	Warranty Card	ARY7045
	5	Remote Control Unit	AXD7246
	6	Battery Cover	AZN7378
NSP	7	Dry Cell Battery (R6P, AA)	VEM1011
	8	Left Pad	XHA3024
	9	Right Pad	XHA3025
	10	Packing Sheet	AHG7069
	11	Packing Case	XHD3145
	12	Operating Instructions (English)	XRB3002
	13	Operating Instructions (French)	See Contrast table (2)

(2) CONTRAST TABLE

VSX-D510/KUXJI and KCXJI are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			VSX-D510 /KUXJI	VSX-D510 /KCXJI	
	13	Operating Instructions (French)	Not used	XRC3026	

2.2 EXTERIOR SECTION

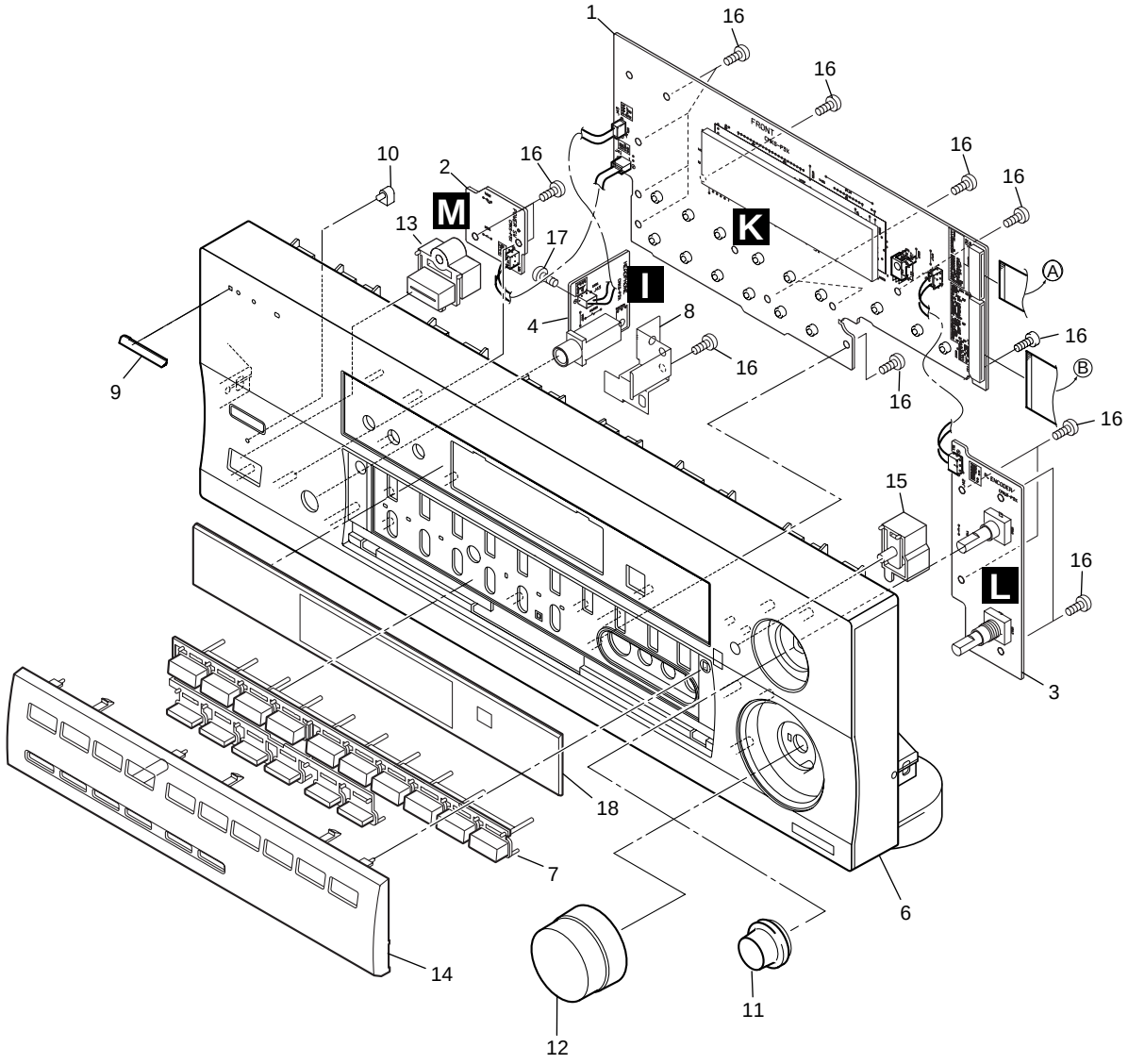


● EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	D.D & INPUT Assy	XWX3024
	2	VIDEO&6CH IN Assy	XWZ3333
NSP	3	AMP INPUT Assy	AWX7382
	4	AMP&PRIMARY Assy	XWZ3372
	5	REGULATOR Assy	AWX7493
	6	TRANS 2 Assy	AWX7468
	7	FM/AM TUNER Unit	AXX7046
NSP	8	TRANS 1 Assy	AWX7390
NSP	9	TRANS 3 Assy	AWX7392
⚠	10	Power Transformer (AC120V)	XTS3043
⚠	11	Fuse (FU1 : 10A)	REK1087
	12	FFC (J31 : 31P/180 BD 60V) (D.D & INPUT CN102 ↔ FRONT CN402)	XDD3055
	13	FFC (J32 : 19P/180 BD 60V) (D.D & INPUT CN103 ↔ FRONT CN401)	XDD3054
	14	FFC (J33 : 14P/200 BD 60V) (D.D & INPUT CN104 ↔ VIDEO&6CH IN CN303)	XDD3060
	15	FFC (J34 : 13P/100 BD 60V) (D.D & INPUT CN105 ↔ FM/AM TUNER CN1)	XDD3059
	16	FFC (J35 : 17P/90 BD 60V) (D.D & INPUT CN106 ↔ AMP INPUT CN290)	XDD3072
	17	FFC (J36 : 22P/80 BD 60V) (REGULATOR CN801 ↔ AMP&PRIMARY CN53)	XDD3057
	18	Strain Relief	CM-22C
⚠	19	AC Power Cord	ADG7024
⚠	20	Fuse (FU2 : 8A)	REK1086

Mark	No.	Description	Part No.
⚠	21	Fuse (FU701 : 10A)	REK1087
	22	Push Rivet	AEC7025
NSP	23	Under Base 409	ANA7094
	24	Rear Panel	XNC3074
	25	Bonnet Case	XZN3111
	26	PCB Angle	ANG7253
	27	Shield R3	ANG7277
	28	Heat Sink Angle F	ANG7251
	29	Heat Sink Angle R	ANG7252
NSP	30	Heat Sink 0.4	ANH7119
	31	Top Cover	XME3004
	32	Foot Assy	REC1263
	33	Rubber Sheet	AEB1111
	34	PCB Mold	AMR2533
NSP	35	Fuse Card	AXX7096
	36	Screw	BBZ30P080FMC
	37	Screw	BBZ30P200FMC
	38	Screw (3x23)	ABA7043
	39	Screw	FBT40P080FZK
NSP	40	Fuse Card	AXX2332
	41	DIGITAL IN Assy	XWZ3360
	42	FFC (J37 : 6P/130 BD 60V) (D.D & INPUT CN1501 ↔ DIGITAL IN CN1901)	XDD3058

2.3 FRONT PANEL SECTION

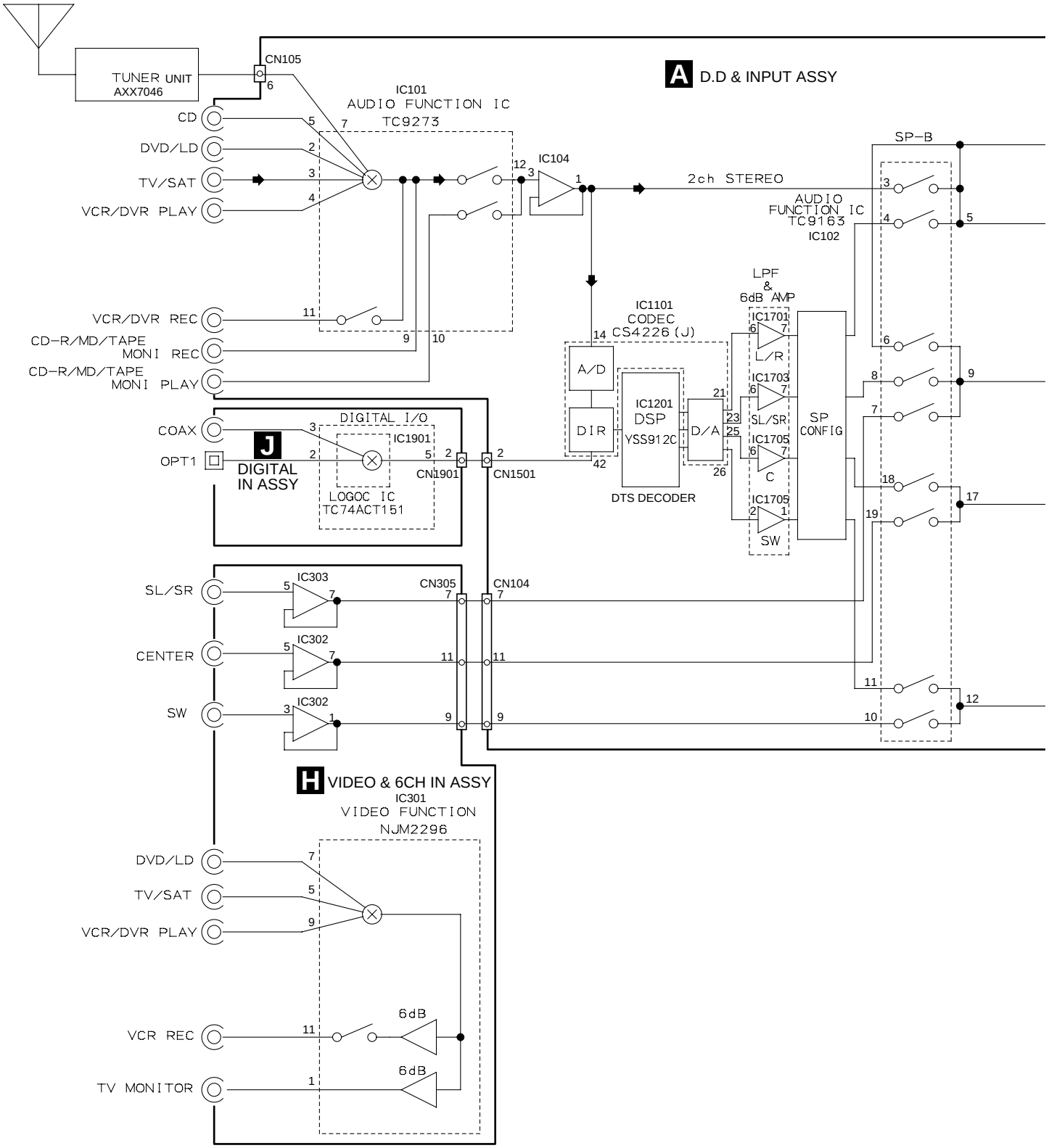


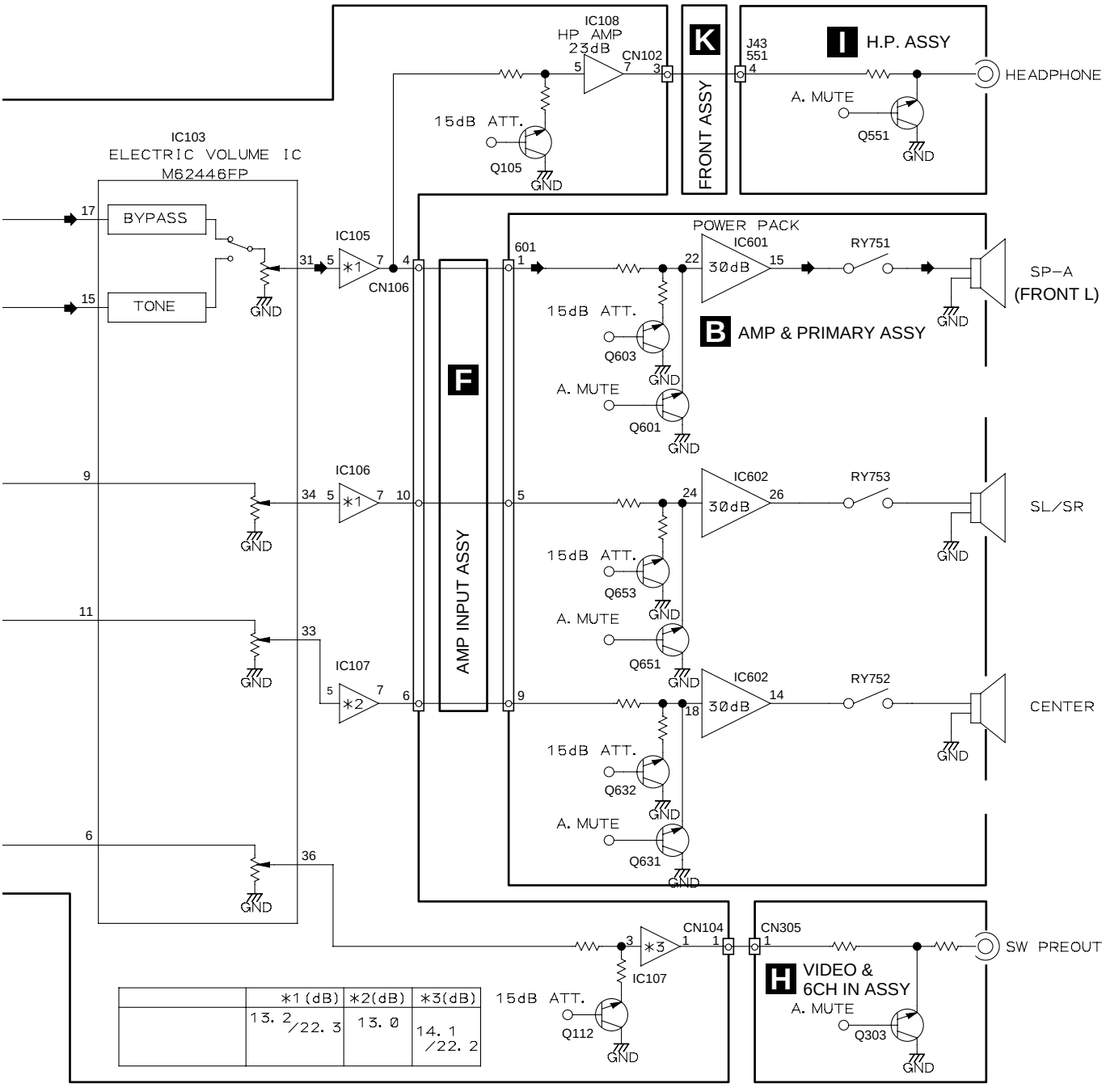
● FRONT PANEL SECTION PARTS LIST

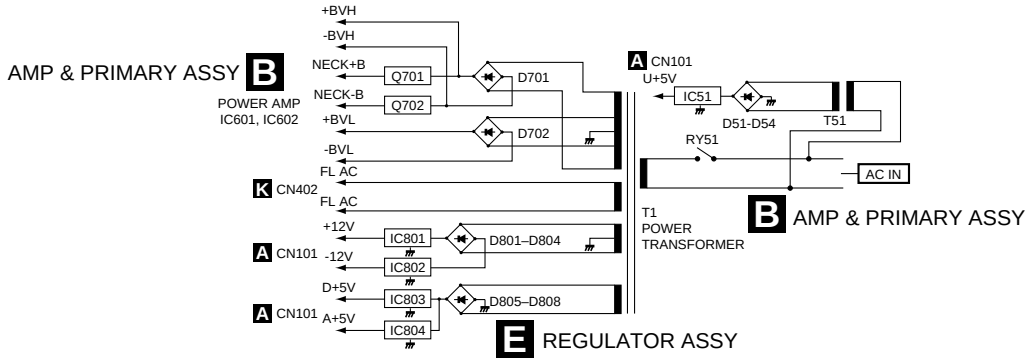
Mark	No.	Description	Part No.
	1	FRONT Assy	XWZ3336
	2	POWER SW Assy	XWZ3352
NSP	3	R. ENCODER Assy	XWZ3353
NSP	4	H.P. Assy	XWZ3356
	5	••••••	
	6	Front Panel	XMB3029
	7	Sub Button	XAD3068
	8	Earth Plate A	XNG3044
	9	Name Plate	PAM1776
	10	LED Lens	PNW2019
	11	Select Knob	XAB3008
	12	Volume Knob	XAB3011
	13	Power Button	XAD3062
	14	Sub Panel	XAK3169
	15	Jog Button	XAD3065
	16	Screw	PPZ30P080FMC
	17	Screw	BBZ30P080FMC
	18	Display Panel	XAK3172

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

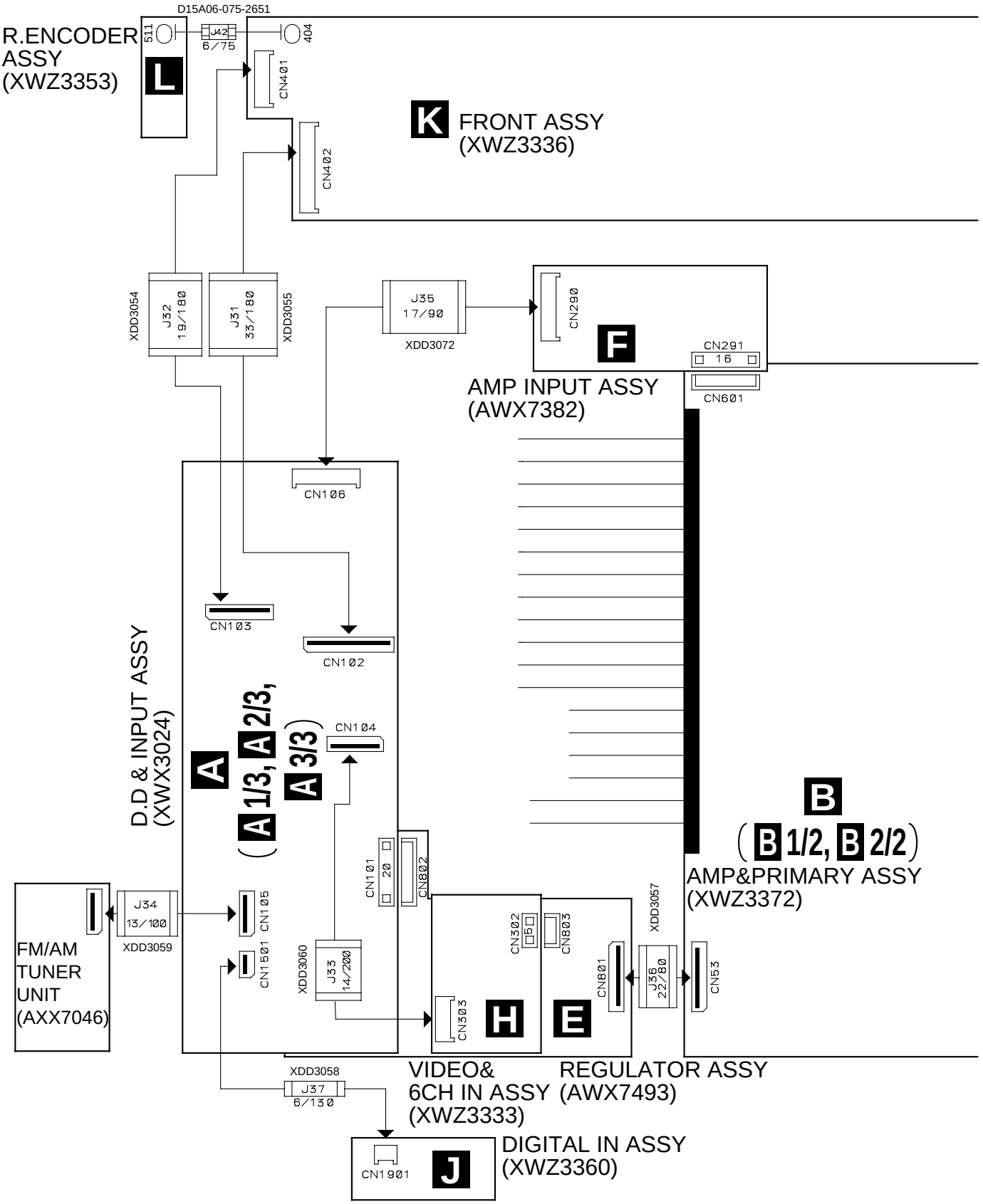
3.1 BLOCK DIAGRAM



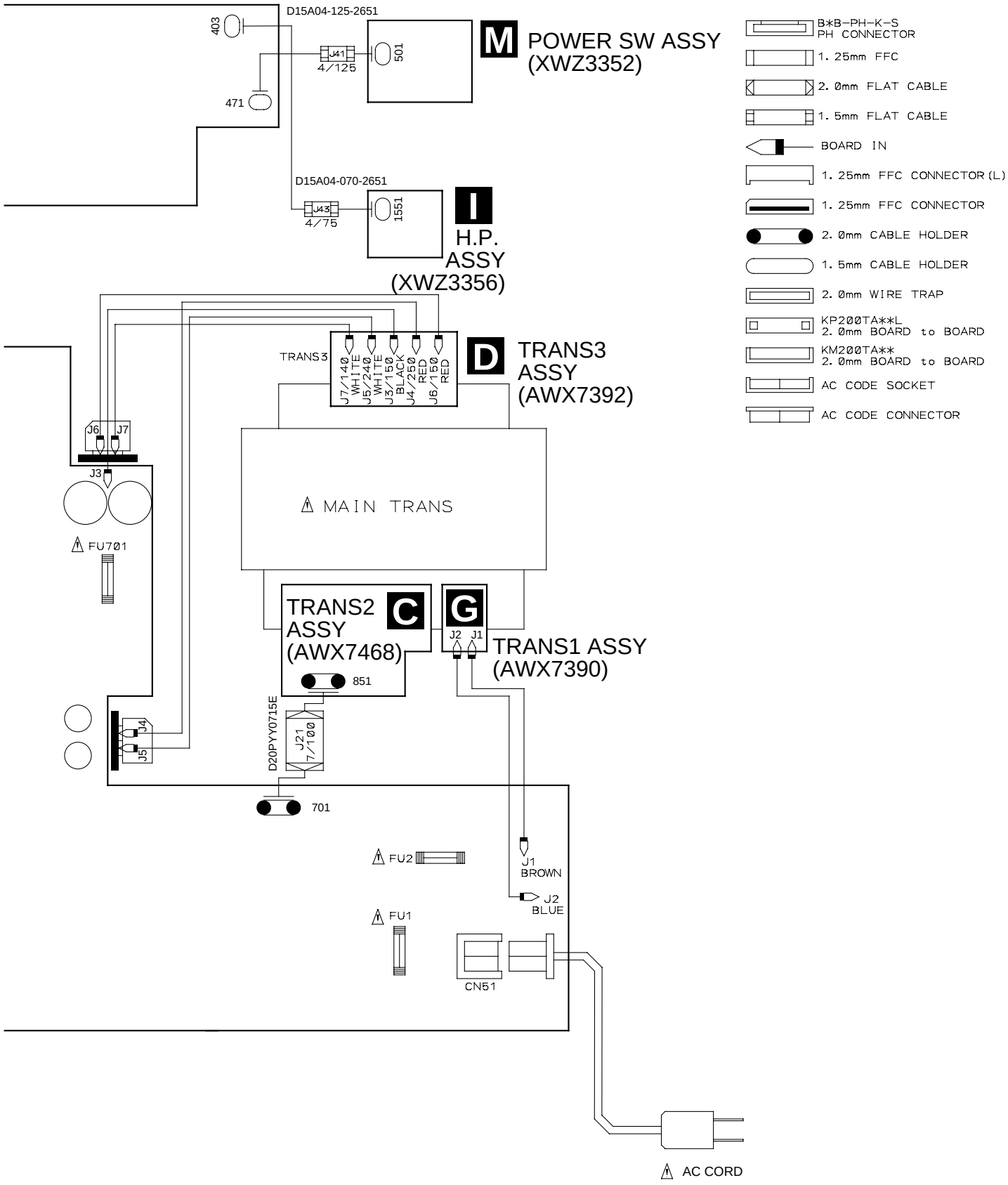

IC108
HP AMP
23dB
CN102
K
FRONT ASSY
J43
551
I H.P. ASSY
HEADPHONE
A. MUTE
Q551
GND
15dB ATT.
Q105
IC103
ELECTRIC VOLUME IC
M62446FP
BYPASS
TONE
IC105
CN106
POWER PACK
IC601
RY751
SP–A
(FRONT L)
B AMP & PRIMARY ASSY
F
AMP INPUT ASSY
IC106
IC602
RY753
SL/SR
IC107
RY752
CENTER
CN104
CN305
SW PREOUT
H VIDEO &
6CH IN ASSY
Q603
Q601
Q653
Q651
Q632
Q631
Q112
Q303
∗1(dB) ∗2(dB) ∗3(dB)
13.2/22.3 13.0 14.1/22.2


AMP & PRIMARY ASSY B
POWER AMP
IC601, IC602
+BVH
-BVH
NECK+B
NECK-B
+BVL
-BVL
Q701
Q702
D701
D702
FL AC
K CN402
FL AC
+12V
-12V
A CN101
IC801
IC802
D801–D804
D+5V
A+5V
A CN101
IC803
IC804
D805–D808
E REGULATOR ASSY
A CN101
U+5V
IC51
D51-D54
T51
RY51
AC IN
T1
POWER
TRANSFORMER
B AMP & PRIMARY ASSY

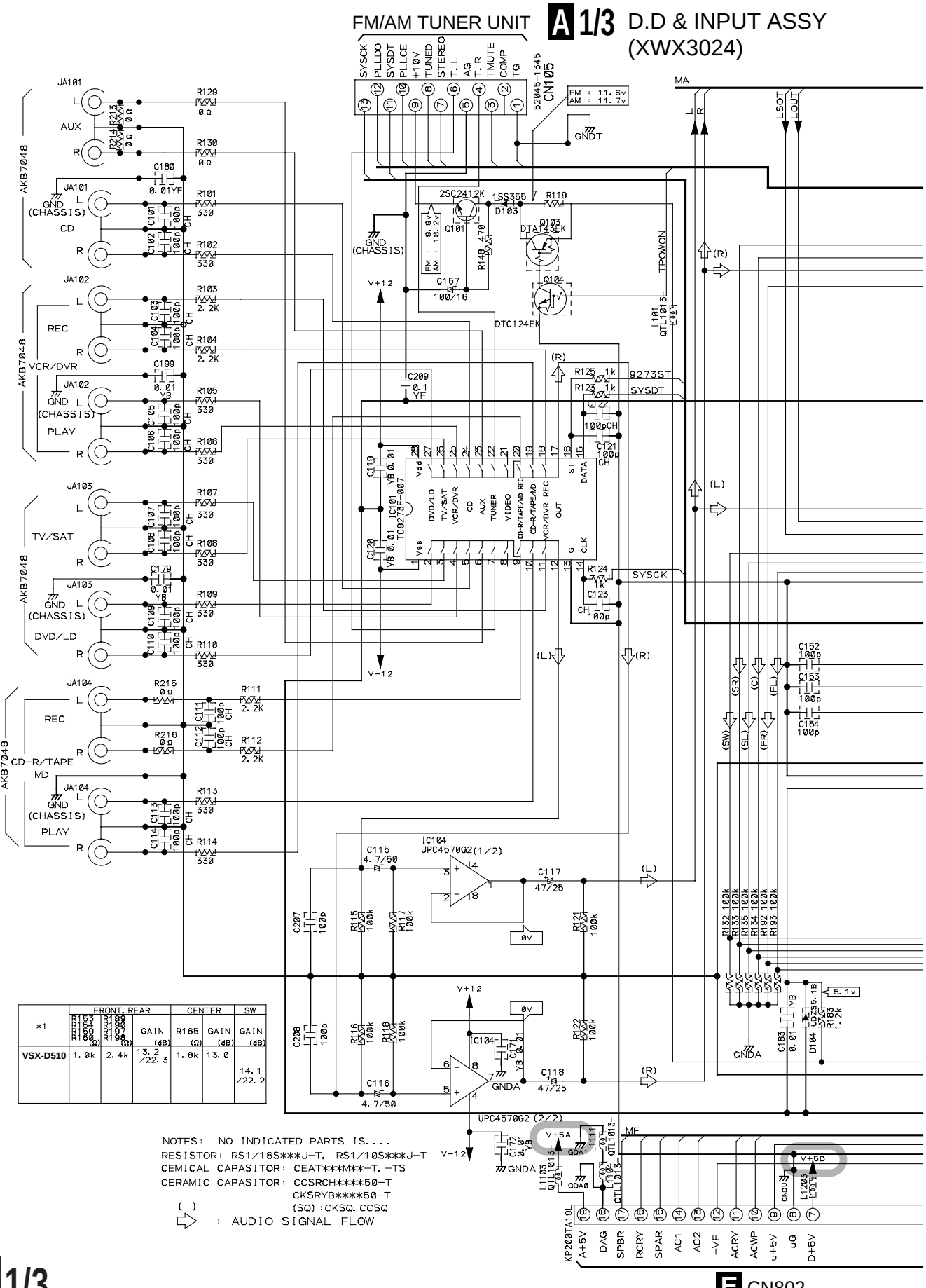
3.2 OVERALL WIRING CONNECTION DIAGRAM and AMP INPUT ASSY



Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".

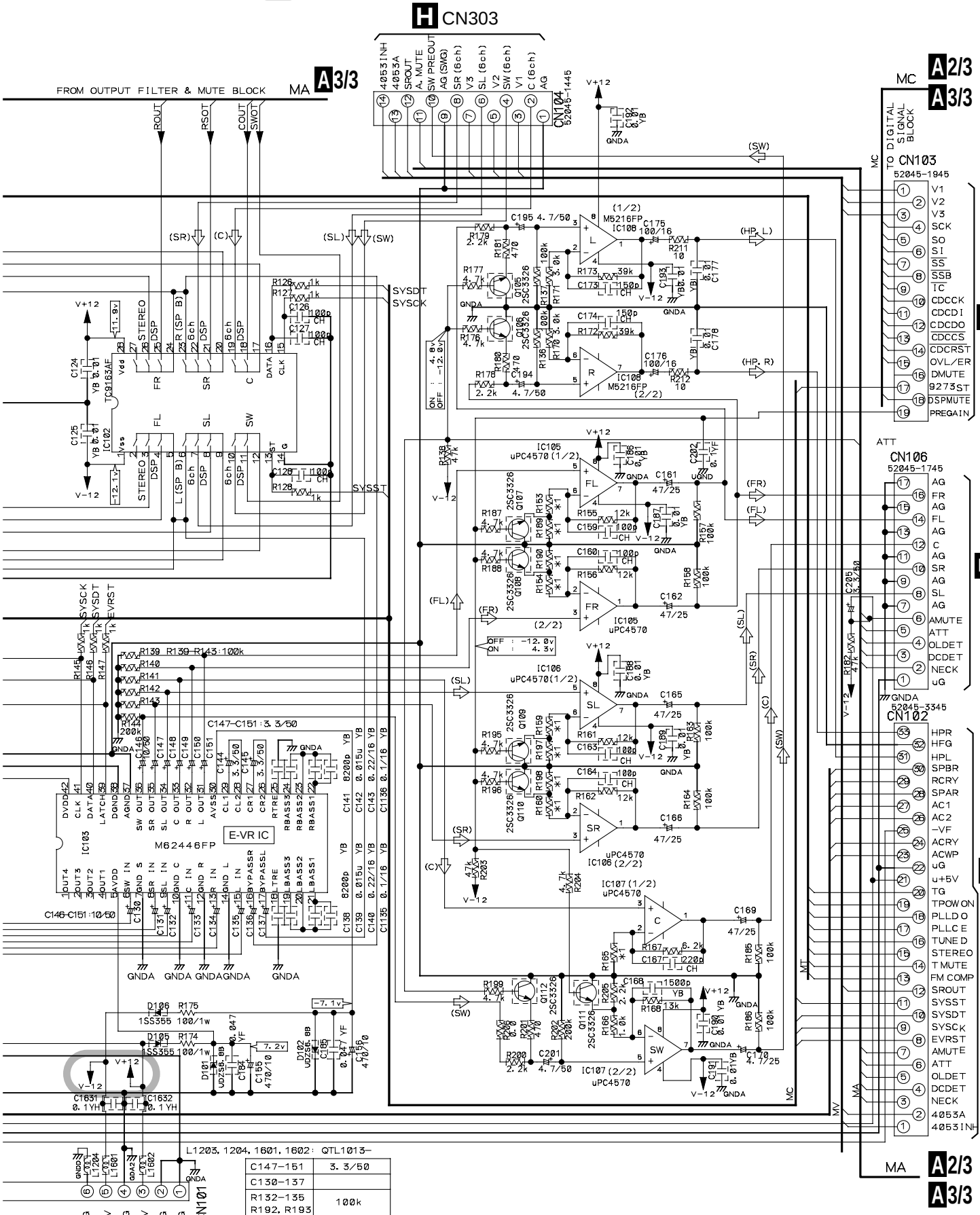


3.3 D.D & INPUT (1/3) ASSY

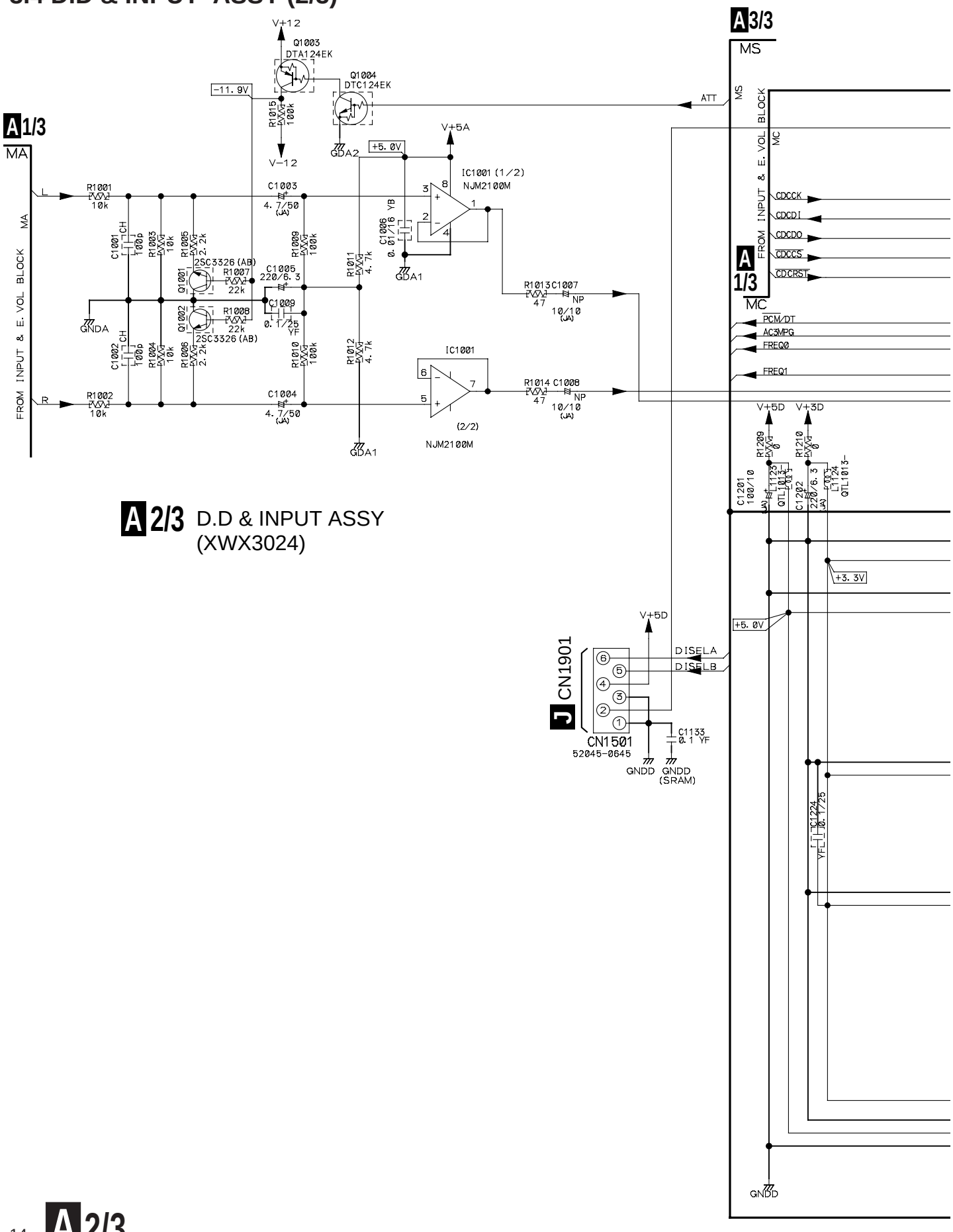


*1	FRONT, REAR			CENTER		SW
	R129 R130 R101 R102 R103 R104 R105 R106 R107 R108 R109 R110 R111 R112 R113 R114 (Ω)	R180 R181 R182 R183 (Ω)	GAIN (dB)	R165 (Ω)	GAIN (dB)	GAIN (dB)
VSX-D510	1.0k	2.4k	13.2 /22.3	1.8k	13.0	14.1 /22.2

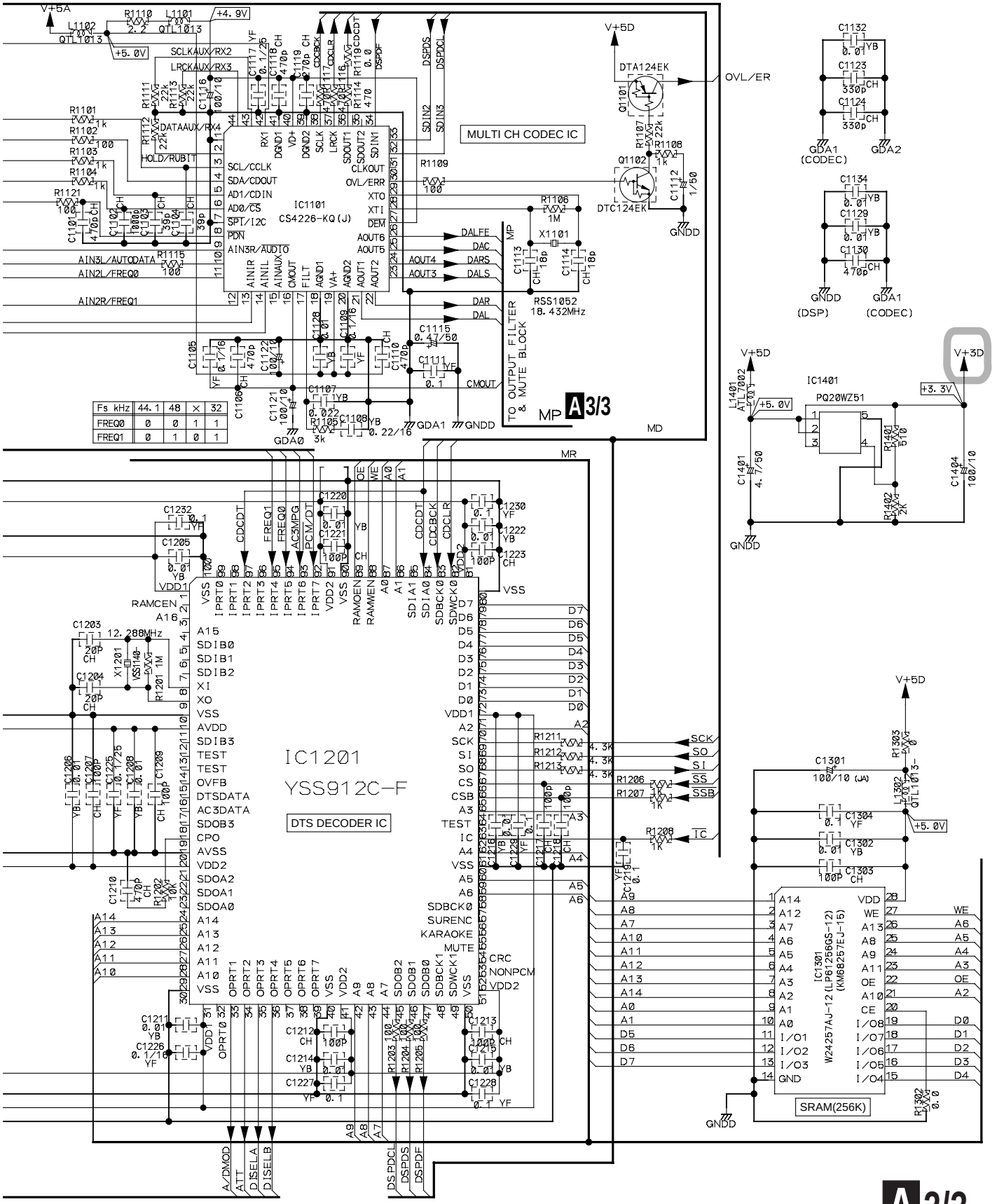
: The power supply is shown with the marked box.



3.4 D.D & INPUT ASSY (2/3)

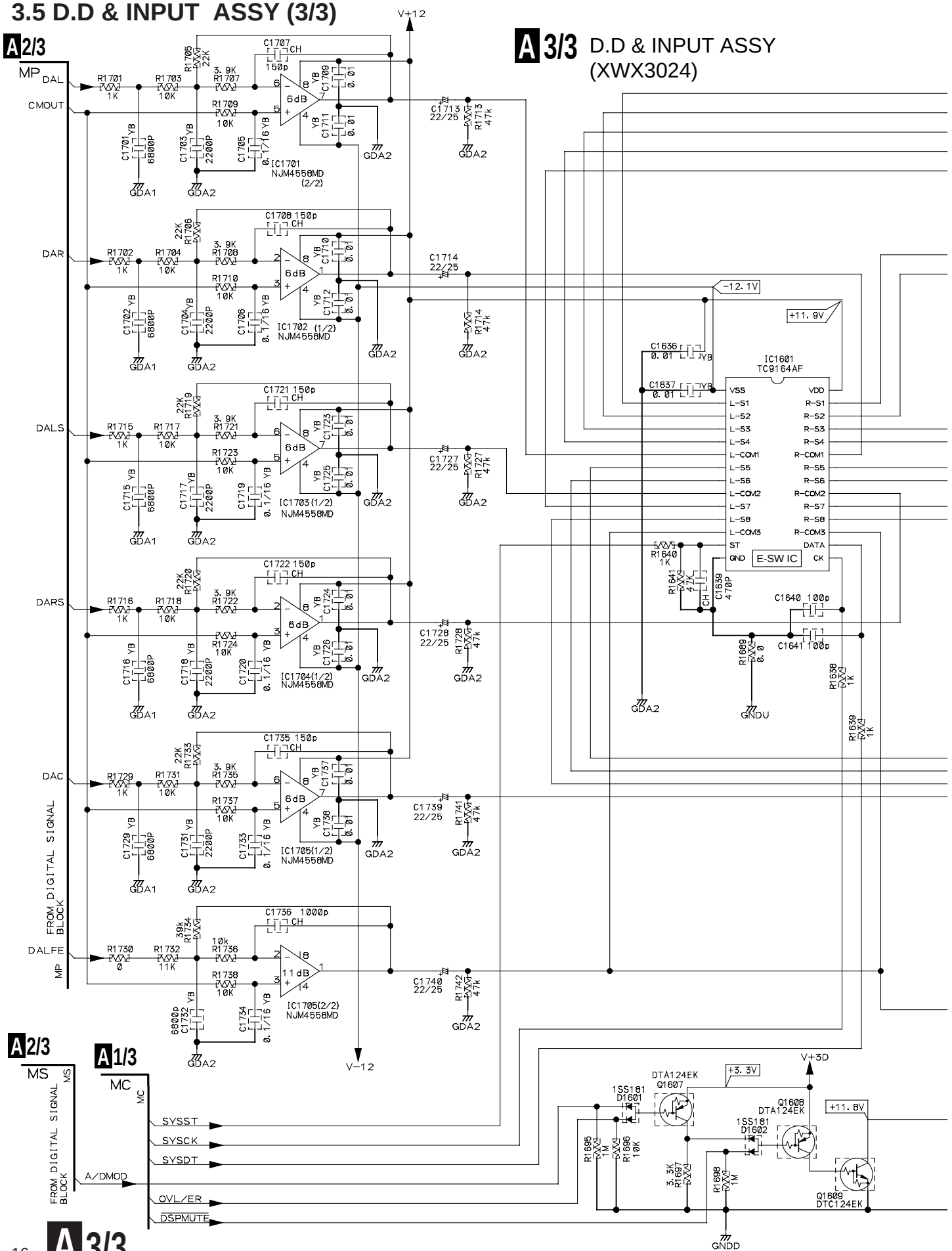


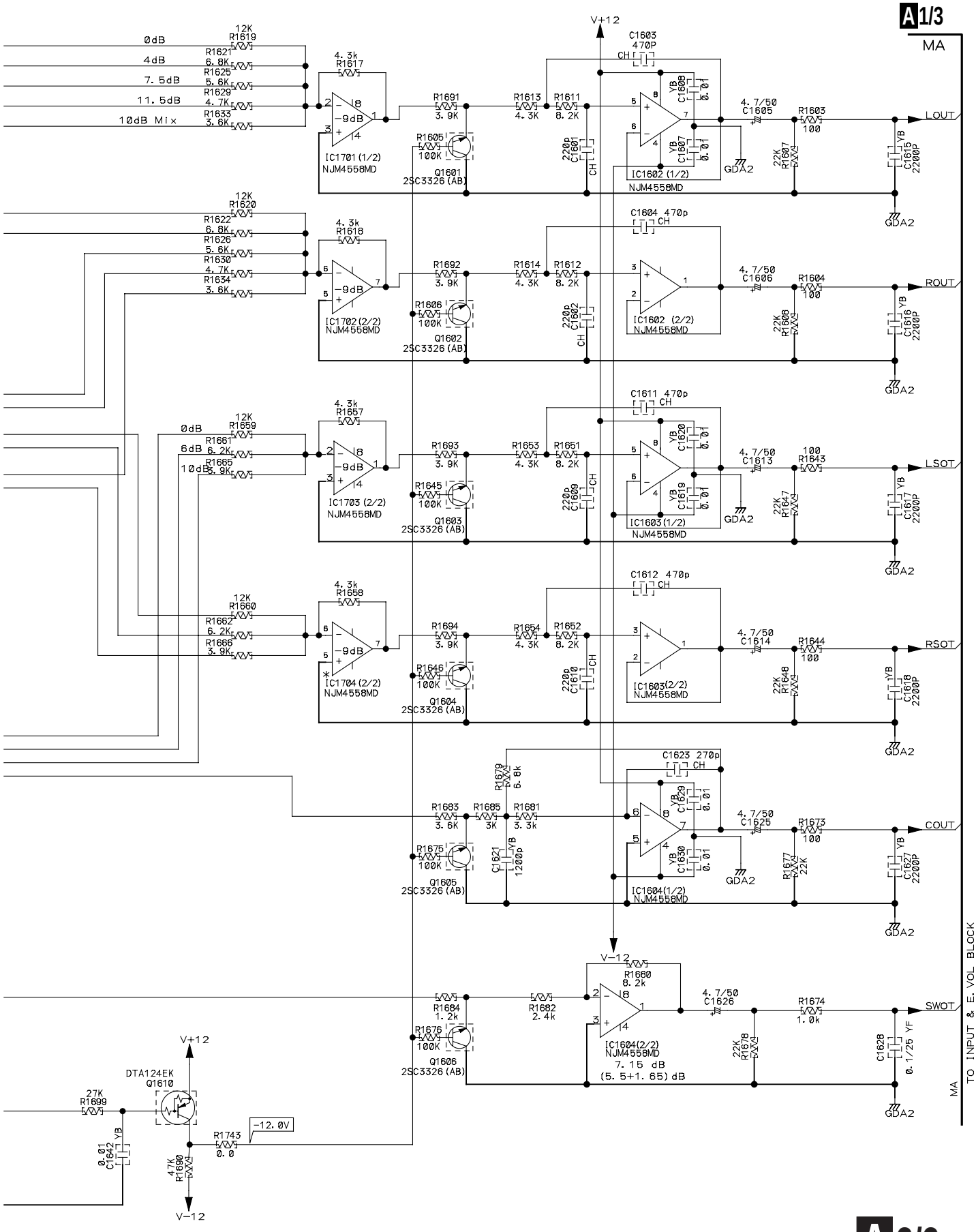
: The power supply is shown with the marked box.



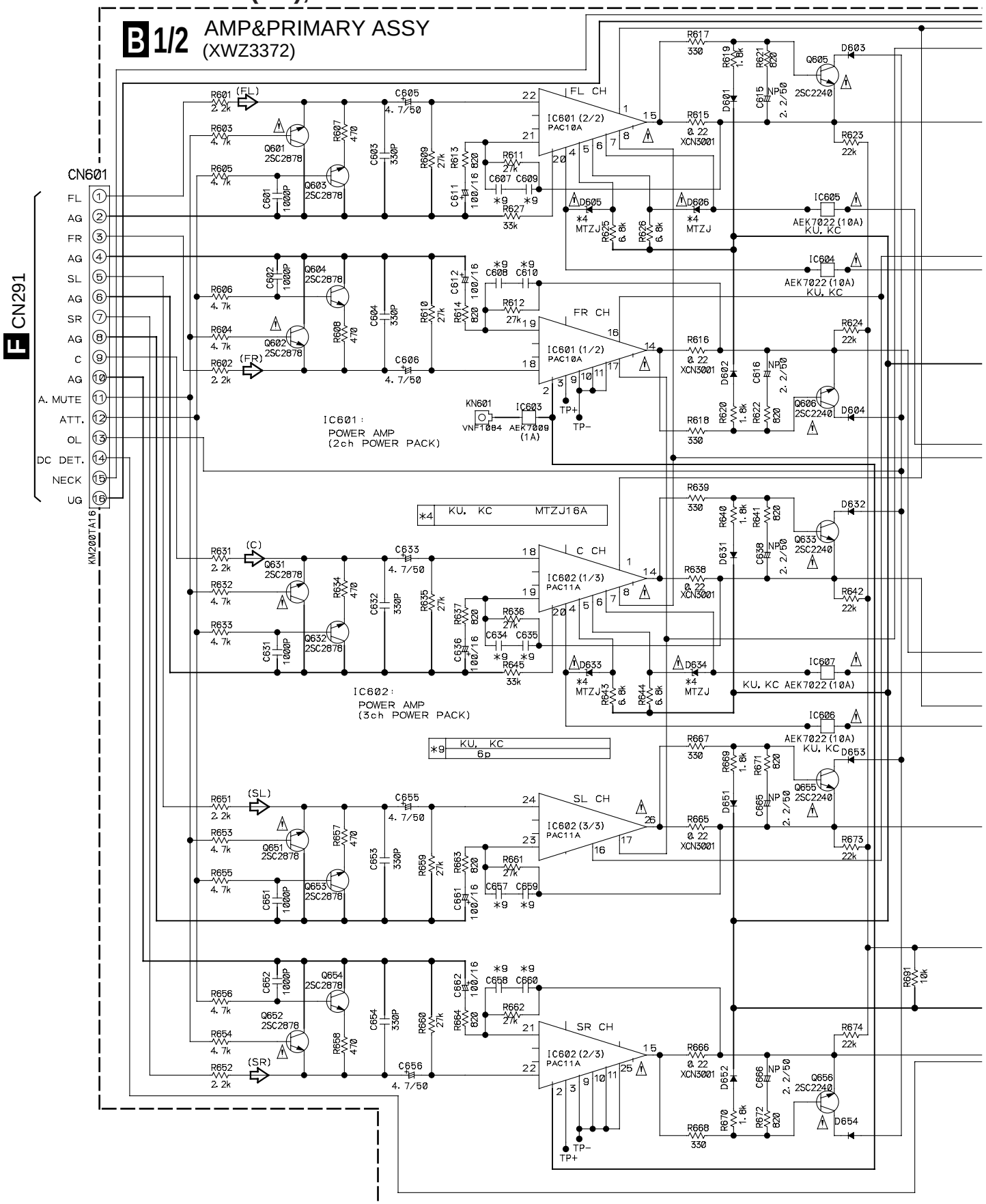
Fs kHz	44.1	48	X	32
FREQ0	0	0	1	1
FREQ1	0	1	0	1

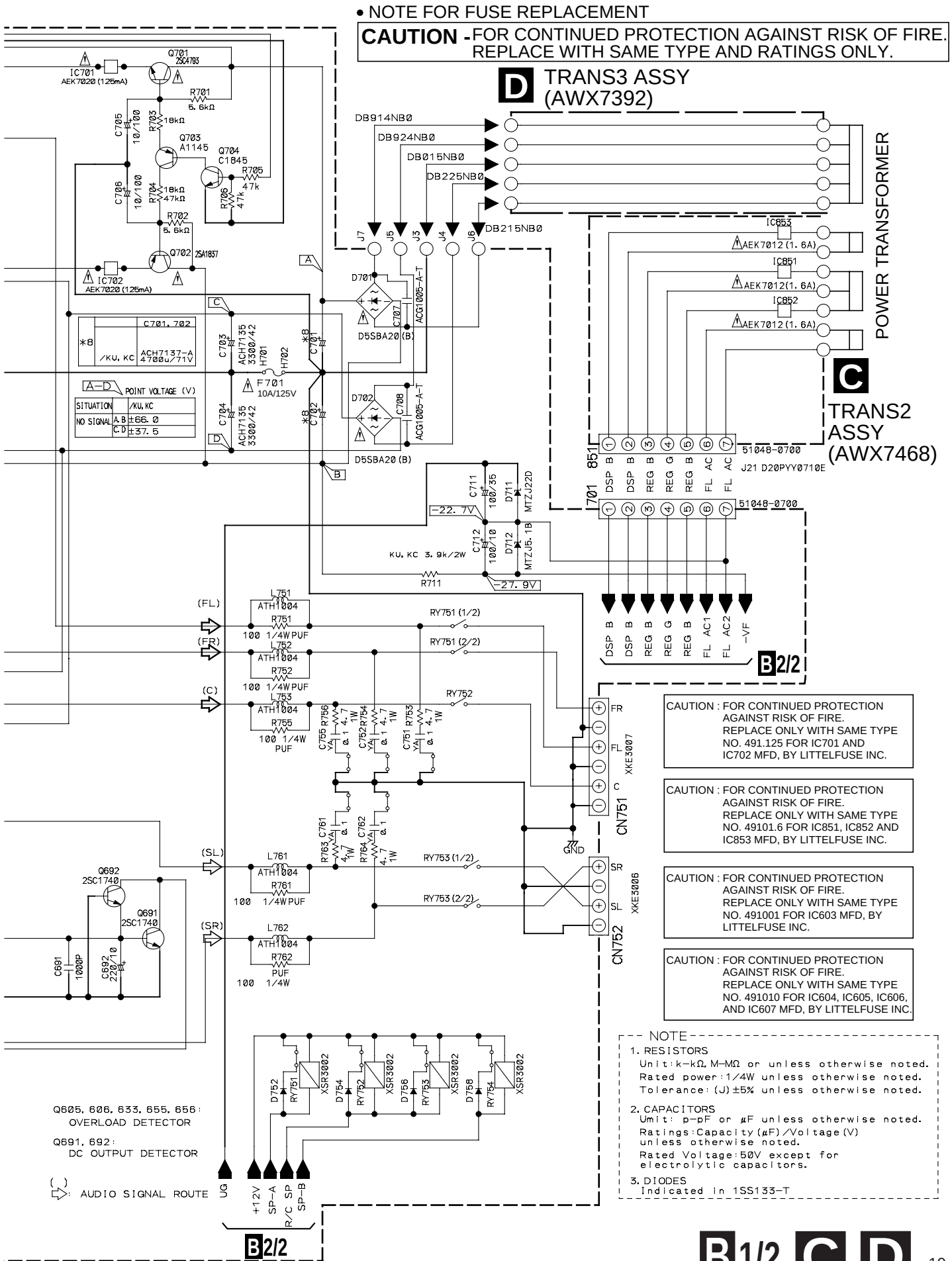
3.5 D.D & INPUT ASSY (3/3)



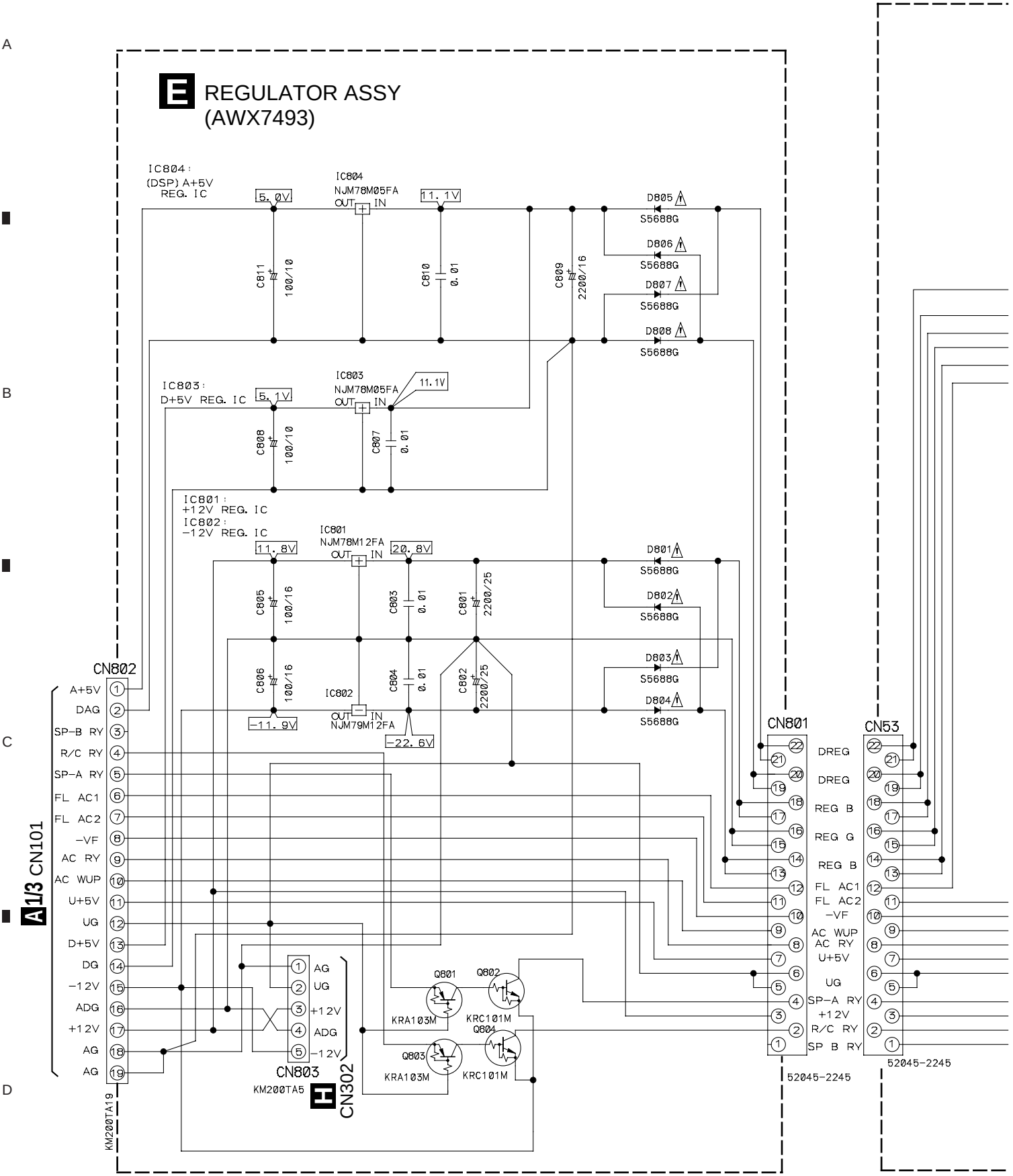

A1/3
MA
V+12
V-12
0dB
4dB
7.5dB
11.5dB
10dB Mix
12K R1619
R1621 6.8K
R1625 5.6K
R1629 4.7K
R1633 3.6K
4.3k R1617
R1691 3.9K
R1613 4.3K
R1611 8.2K
C1603 470P CH
C1608 YB 0.01
4.7/50 C1605
R1603 100
LOUT
R1605 100K
Q1601 2SC3326(AB)
220p C1601 CH
C1607 YB 0.01
GDA2
22K R1607
C1615 YB 2200P
[IC1701(1/2) NJM4558MD
[IC1602(1/2) NJM4558MD
12K R1620
R1622 6.8K
R1626 5.6K
R1630 4.7K
R1634 3.6K
4.3k R1618
R1692 3.9K
R1614 4.3K
R1612 8.2K
C1604 470p CH
4.7/50 C1606
R1604 100
ROUT
R1606 100K
Q1602 2SC3326(AB)
220p C1602 CH
22K R1608
C1616 YB 2200P
[IC1702(2/2) NJM4558MD
[IC1602(2/2) NJM4558MD
0dB
6dB
10dB
12K R1659
R1661 6.2K
R1665 3.9K
4.3k R1657
R1693 3.9K
R1653 4.3K
R1651 8.2K
C1611 470p CH
C1620 YB 0.01
4.7/50 C1613
100 R1643
LSOT
R1645 100K
Q1603 2SC3326(AB)
220p C1609 CH
C1619 YB 0.01
22K R1647
C1617 YB 2200P
[IC1703(2/2) NJM4558MD
[IC1603(1/2) NJM4558MD
12K R1660
R1662 6.2K
R1666 3.9K
4.3k R1658
R1694 3.9K
R1654 4.3K
R1652 8.2K
C1612 470p CH
4.7/50 C1614
R1644 100
RSOT
R1646 100K
Q1604 2SC3326(AB)
220p C1610 CH
22K R1648
C1618 YB 2200P
[IC1704(2/2) NJM4558MD
[IC1603(2/2) NJM4558MD
C1623 270p CH
R1679 6.8k
R1683 3.6K
R1685 3K
R1681 3.3k
C1629 YB 0.01
4.7/50 C1625
R1673 100
COUT
R1675 100K
C1621 YB 1200p
Q1605 2SC3326(AB)
C1630 YB 0.01
22K R1677
C1627 YB 2200P
[IC1604(1/2) NJM4558MD
R1680 8.2k
R1684 1.2k
R1682 2.4k
4.7/50 C1626
R1674 1.0k
SWOT
R1676 100K
Q1606 2SC3326(AB)
[IC1604(2/2) NJM4558MD
7.15 dB
(5.5+1.65)dB
22K R1678
C1628 0.1/25 YF
TO INPUT & E.VOL BLOCK
DTA124EK Q1610
27K R1699
0.01 C1642 YB
R1743 0.0
-12.0V
47K R1690

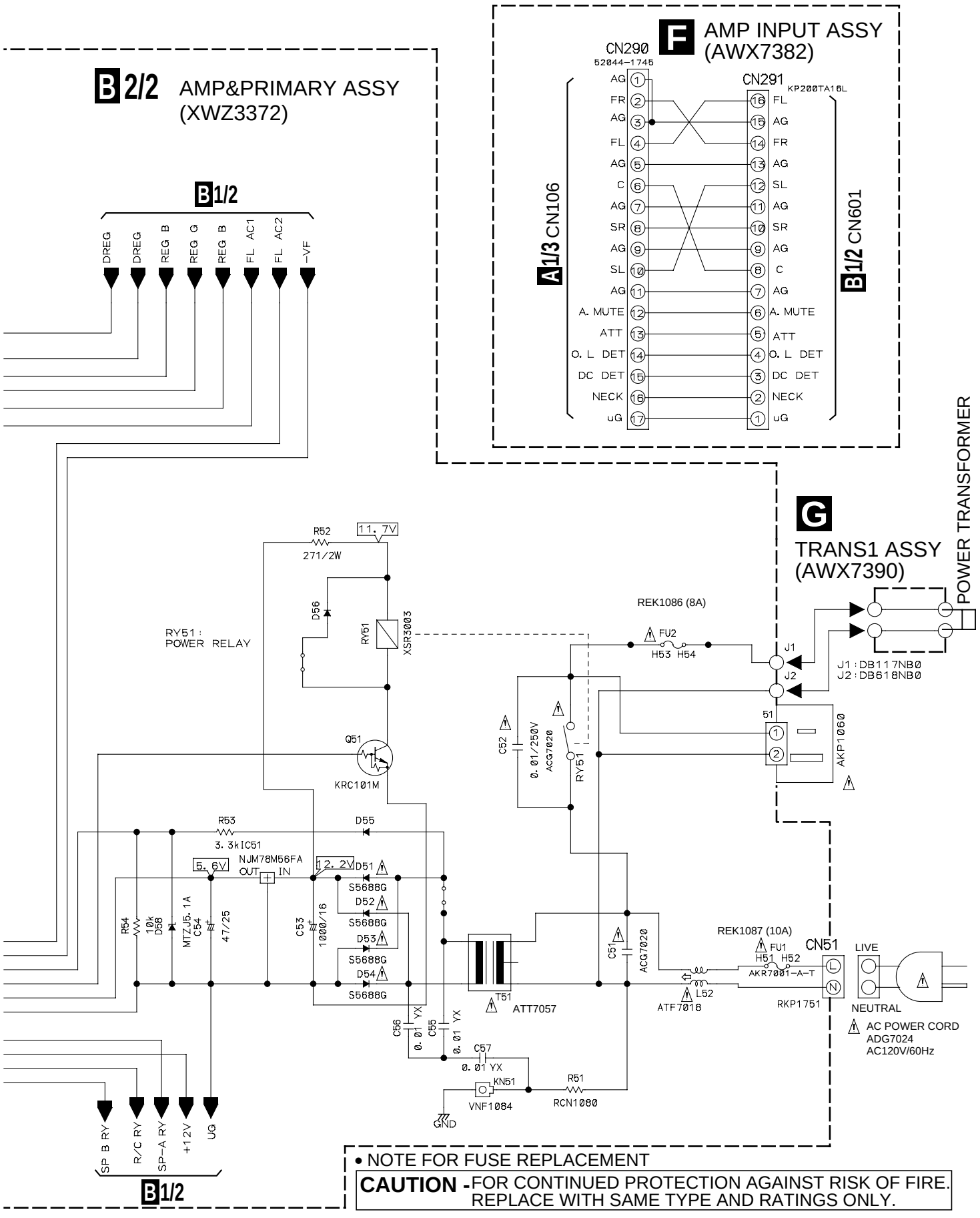
3.6 AMP&PRIMARY (1/2), TRANS2 and TRANS3 ASSYS




• NOTE FOR FUSE REPLACEMENT
CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.
D TRANS3 ASSY (AWX7392)
POWER TRANSFORMER
C TRANS2 ASSY (AWX7468)
B2/2
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.125 FOR IC701 AND IC702 MFD, BY LITTELFUSE INC.
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 49101.6 FOR IC851, IC852 AND IC853 MFD, BY LITTELFUSE INC.
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491001 FOR IC603 MFD, BY LITTELFUSE INC.
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491010 FOR IC604, IC605, IC606, AND IC607 MFD, BY LITTELFUSE INC.
NOTE
1. RESISTORS
Unit: k-kΩ, M-MΩ or unless otherwise noted.
Rated power: 1/4W unless otherwise noted.
Tolerance: (J) ±5% unless otherwise noted.
2. CAPACITORS
Umit: p-pF or μF unless otherwise noted.
Ratings: Capacity (μF) / Voltage (V) unless otherwise noted.
Rated Voltage: 50V except for electrolytic capacitors.
3. DIODES
Indicated in 1SS133-T
Q605, 606, 633, 655, 656: OVERLOAD DETECTOR
Q691, 692: DC OUTPUT DETECTOR
( ) : AUDIO SIGNAL ROUTE
B2/2

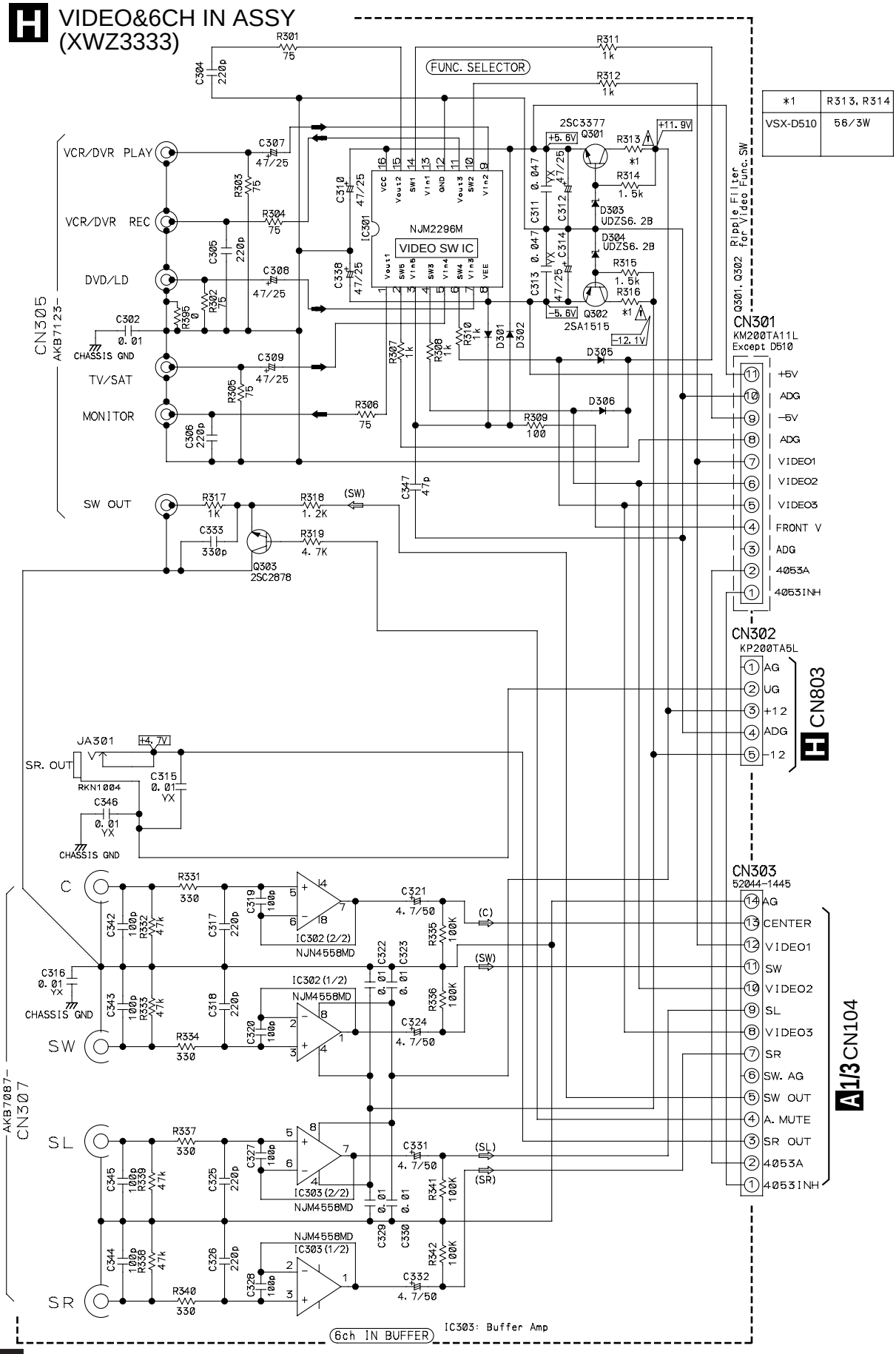
3.7 AMP&PRIMARY (2/2), REGULATOR, AMP INPUT and TRANS1 ASSYS




B 2/2 AMP&PRIMARY ASSY
(XWZ3372)
B1/2
DREG
DREG
REG B
REG G
REG B
FL AC1
FL AC2
−VF
F AMP INPUT ASSY
(AWX7382)
CN290
52044−1745
CN291
KP200TA16L
A1/3 CN106
B1/2 CN601
AG
FR
AG
FL
AG
C
AG
SR
AG
SL
AG
A. MUTE
ATT
O. L DET
DC DET
NECK
uG
FL
AG
FR
AG
SL
AG
SR
AG
C
AG
A. MUTE
ATT
O. L DET
DC DET
NECK
uG
G
TRANS1 ASSY
(AWX7390)
POWER TRANSFORMER
J1 : DB117NB0
J2 : DB618NB0
REK1086 (8A)
FU2
H53 H54
J1
J2
51
AKP1060
RY51 :
POWER RELAY
R52
271/2W
11. 7V
D56
RY51
XSR3003
Q51
KRC101M
C52
0. 01/250V
ACG7020
RY51
R53
3. 3kIC51
D55
5. 6V
NJM78M56FA
OUT
IN
12. 2V
D51
S5688G
D52
S5688G
D53
S5688G
D54
S5688G
R54
10k
D58
MTZJ5. 1A
C54
47/25
C53
1000/16
T51
ATT7057
C51
ACG7020
REK1087 (10A)
FU1
H51 H52
AKR7001−A−T
CN51
L52
ATF7018
RKP1751
LIVE
NEUTRAL
AC POWER CORD
ADG7024
AC120V/60Hz
C56
0. 01 YX
C55
0. 01 YX
C57
0. 01 YX
KN51
VNF1084
R51
RCN1080
GND
SP B RY
R/C RY
SP−A RY
+12V
UG
B1/2
• NOTE FOR FUSE REPLACEMENT
CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
REPLACE WITH SAME TYPE AND RATINGS ONLY.

3.8 VIDEO&6CH IN, H. P. and DIGITAL IN ASSYS

H VIDEO&6CH IN ASSY (XWZ3333)



*1	R313, R314
VSX-D510	56/3W

NJM2296D control port status

SW1	SW2	SW3	SW4	SW5	Vout1	Vout2	Vout3
1	0	(1)	0	1	Vin2	Vin2	mute
1	1	(1)	0	1	Vin3	Vin3	Vin3
1	1	0	1	1	Vin4	Vin4	Vin4
1	1	1	1	1	Vin5	Vin5	Vin5
0	0	(0)	(0)	0	mute	mute	mute

VIN 2. VCR/DVR
VIN 3. DVD/LD
VIN 4. TV/SAT
VIN 5. FRONT VIDEO

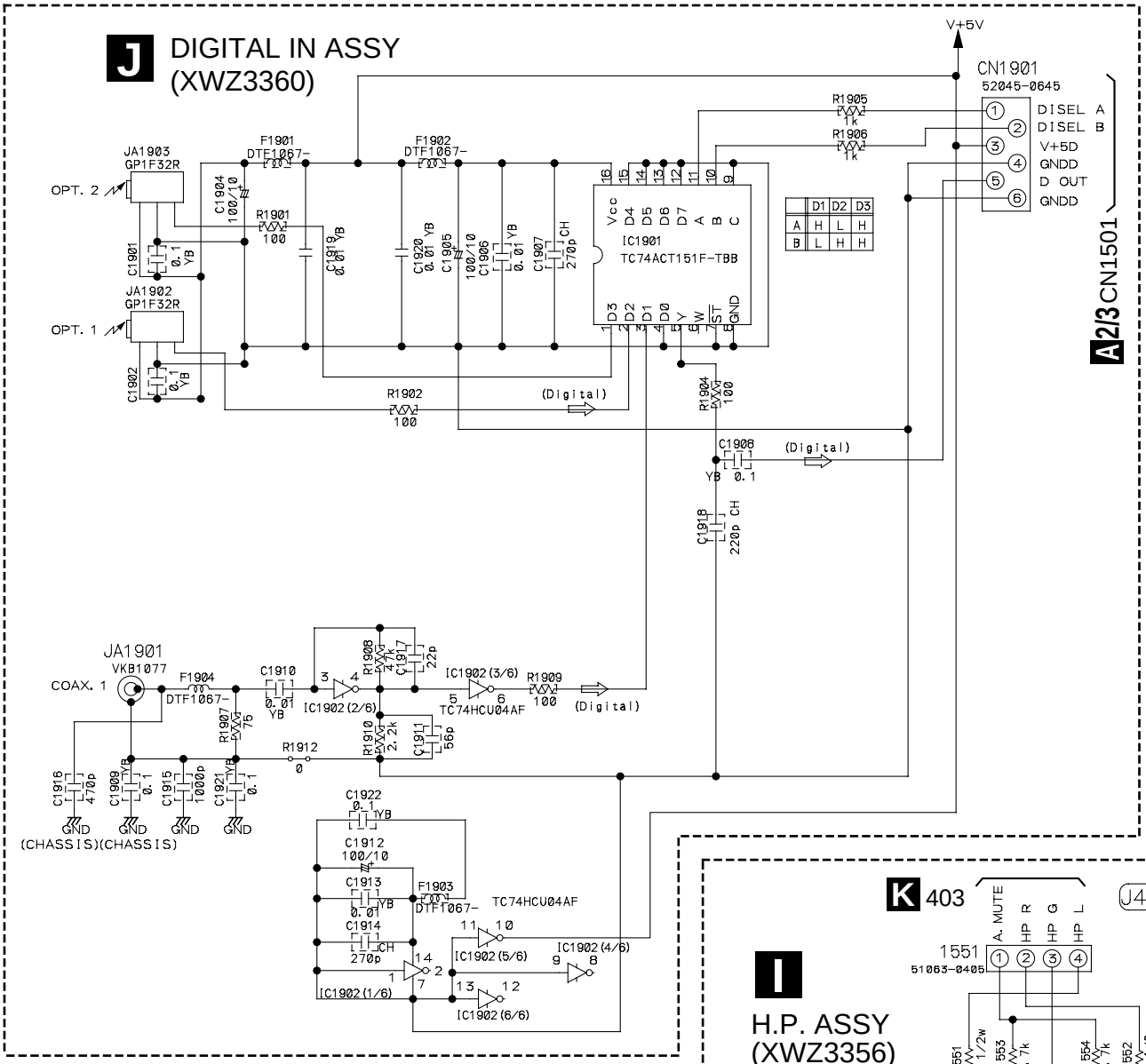
Vout1. MONITOR out
Vout2. MR out
Vout3. VCR/DVR out

-NOTE-

1. RESISTORS
   Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/10W unless otherwise noted.
   Tolerance: (J)±5% unless otherwise noted.
2. CAPACITORS
   Unit: p-pF or μF unless otherwise noted.
   Ratings: Capacity(μF)/Voltage(V) unless otherwise noted.
   Rated Voltage: 50V expect for electrolytic capacitors.
3. DIODES
   Indicated in 1SS355-TRB

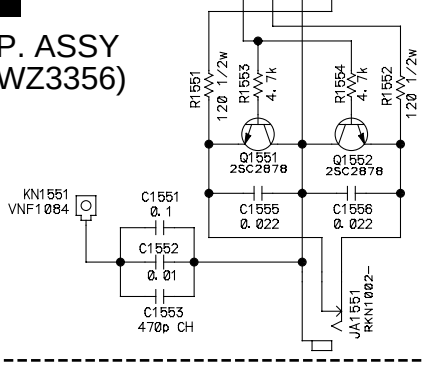
Video Signal Flow
Audio Signal Flow

J DIGITAL IN ASSY (XWZ3360)

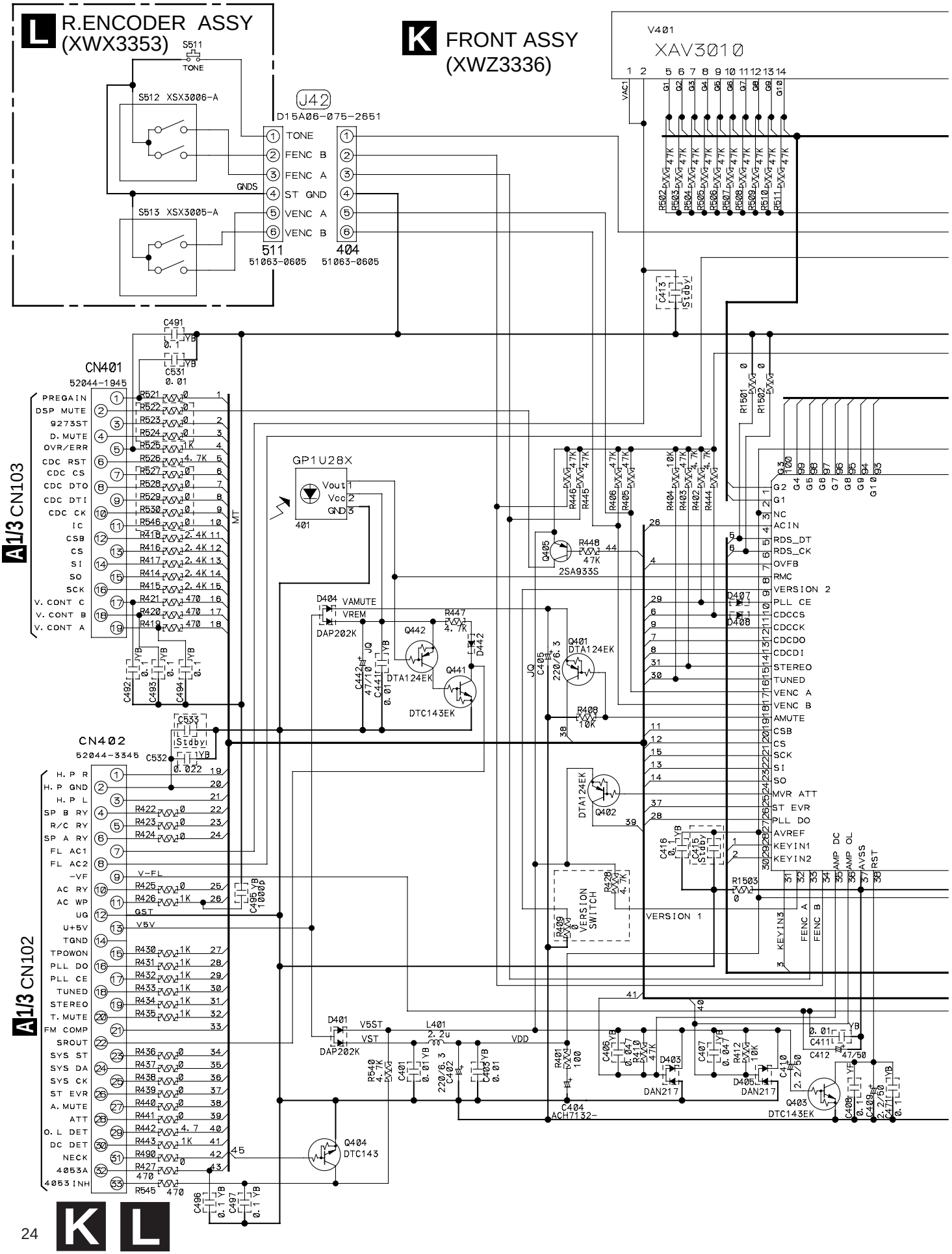


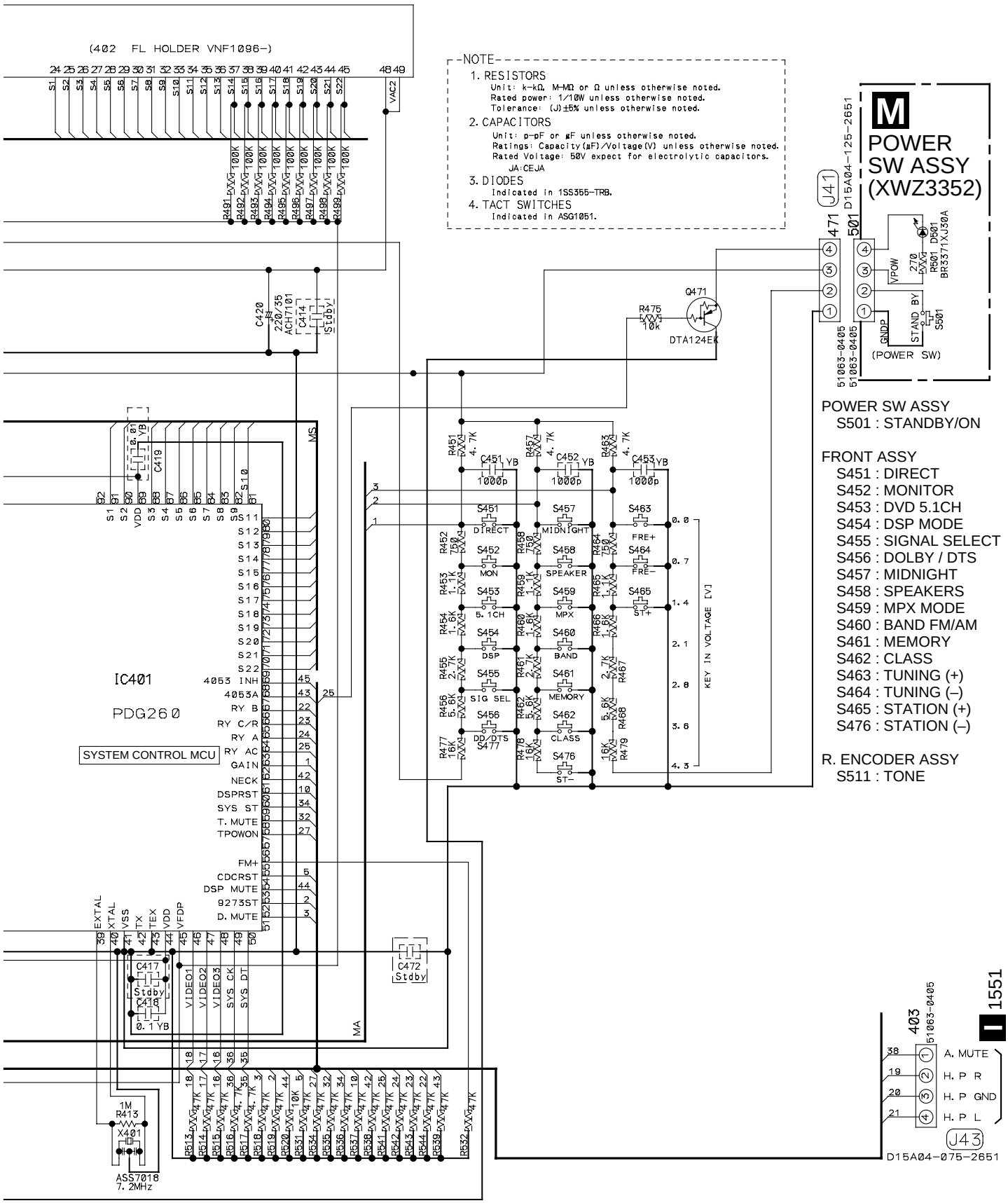
K 403

I H.P. ASSY (XWZ3356)



3.9 FRONT, R. ENCODER and POWER SW ASSYS




(402 FL HOLDER VNF1096-)
NOTE
1. RESISTORS
Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
Rated power: 1/10W unless otherwise noted.
Tolerance: (J)±5% unless otherwise noted.
2. CAPACITORS
Unit: p-pF or μF unless otherwise noted.
Ratings: Capacity(μF)/Voltage(V) unless otherwise noted.
Rated Voltage: 50V expect for electrolytic capacitors.
JA:CEJA
3. DIODES
Indicated in 1SS355-TRB.
4. TACT SWITCHES
Indicated in ASG1051.
M
POWER SW ASSY (XWZ3352)
J41
D15A04-125-2651
471
501
VPOW
270
R501
D501
BR3371XJ30A
STAND BY
S501
GNDP
51063-0405
51063-0405
(POWER SW)
Q471
R475
10K
DTA124EK
POWER SW ASSY
S501 : STANDBY/ON
FRONT ASSY
S451 : DIRECT
S452 : MONITOR
S453 : DVD 5.1CH
S454 : DSP MODE
S455 : SIGNAL SELECT
S456 : DOLBY / DTS
S457 : MIDNIGHT
S458 : SPEAKERS
S459 : MPX MODE
S460 : BAND FM/AM
S461 : MEMORY
S462 : CLASS
S463 : TUNING (+)
S464 : TUNING (–)
S465 : STATION (+)
S476 : STATION (–)
R. ENCODER ASSY
S511 : TONE
IC401
PDG260
SYSTEM CONTROL MCU
4053 INH
4053A
RY B
RY C/R
RY A
RY AC
GAIN
NECK
DSPRST
SYS ST
T. MUTE
TPOWON
FM+
CDCRST
DSP MUTE
9273ST
D. MUTE
EXTAL
XTAL
VSS
TX
TEX
VDD
VFDP
VIDEO1
VIDEO2
VIDEO3
SYS CK
SYS DT
S451 DIRECT
S452 MON
S453 5.1CH
S454 DSP
S455 SIG SEL
S456 DD/DTS
S457 MIDNIGHT
S458 SPEAKER
S459 MPX
S460 BAND
S461 MEMORY
S462 CLASS
S463 FRE+
S464 FRE-
S465 ST+
S476 ST-
S477
KEY IN VOLTAGE [V]
0.0
0.7
1.4
2.1
2.8
3.6
4.3
X401
1M
R413
ASS7018
7.2MHz
J43
D15A04-075-2651
403
51063-0405
A. MUTE
H. P R
H. P GND
H. P L
1551

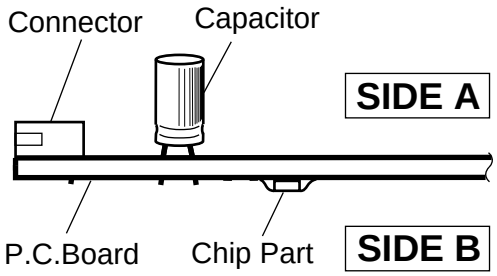
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

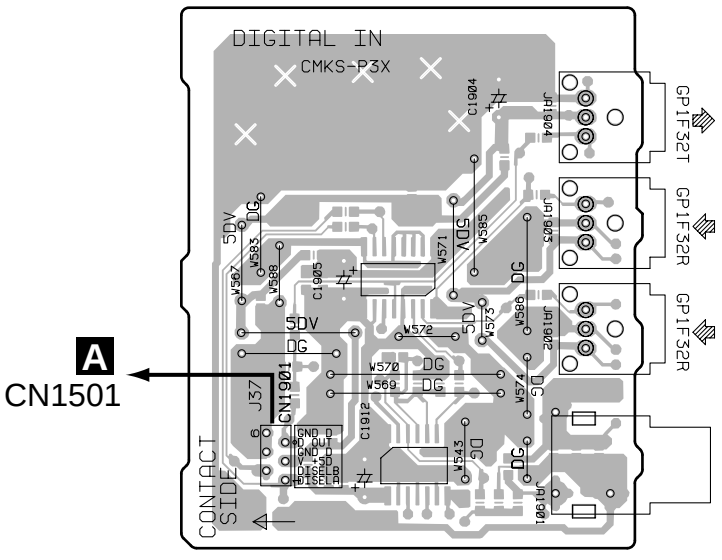
Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



4.1 DIGITAL IN ASSY

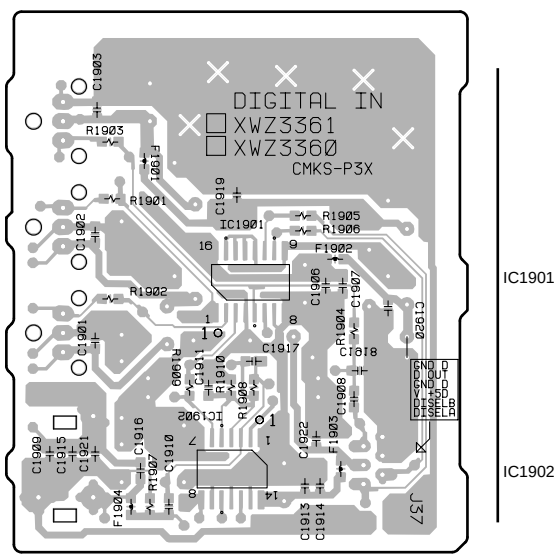
J DIGITAL IN ASSY



(XNP3035-B)

SIDE A

J DIGITAL IN ASSY

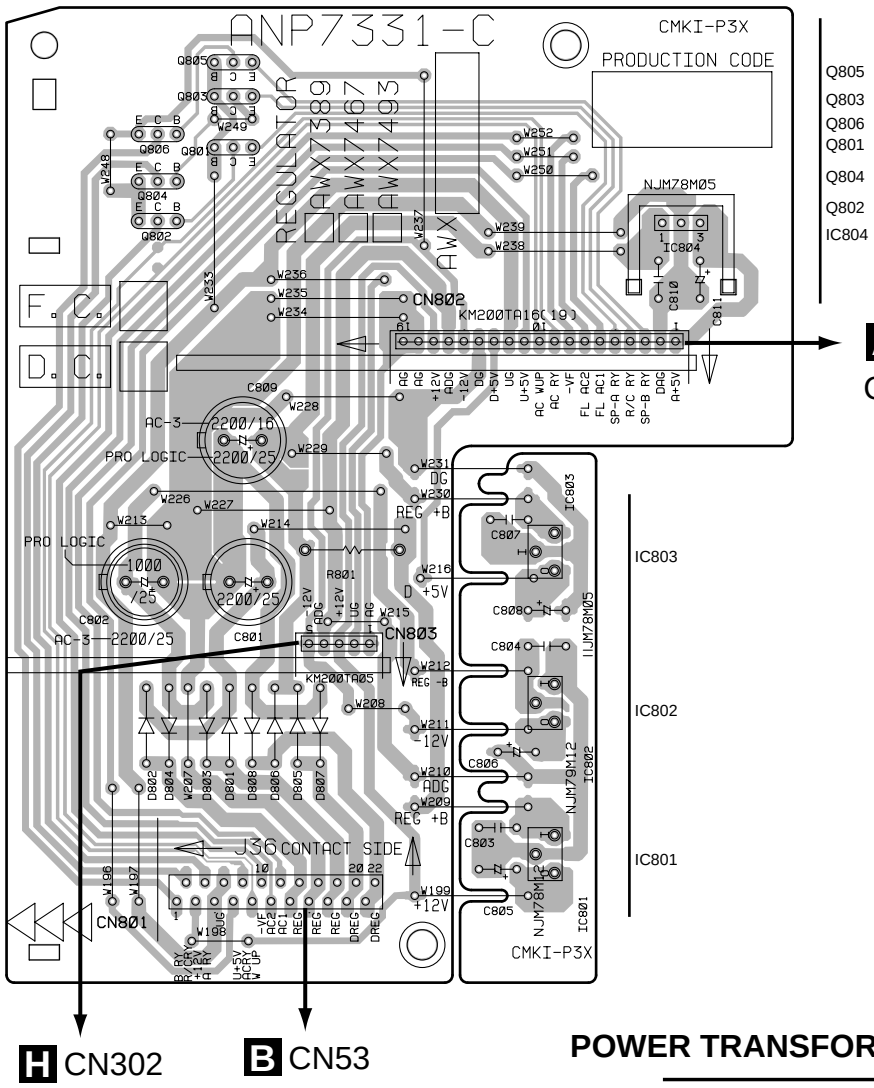


(XNP3035-B)

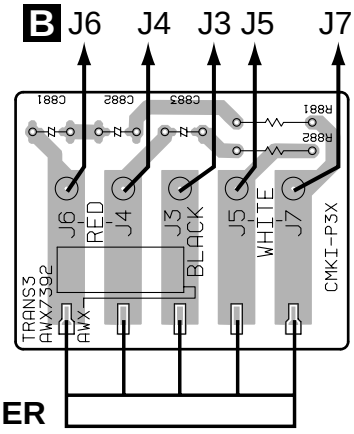
SIDE B

4.2 TRANS2, TRANS3, REGULATOR and TRANS1 ASSYS

E REGULATOR ASSY

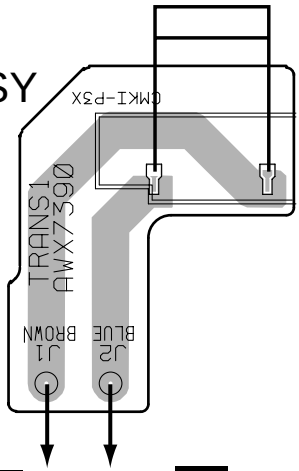


D TRANS3 ASSY



POWER TRANSFORMER

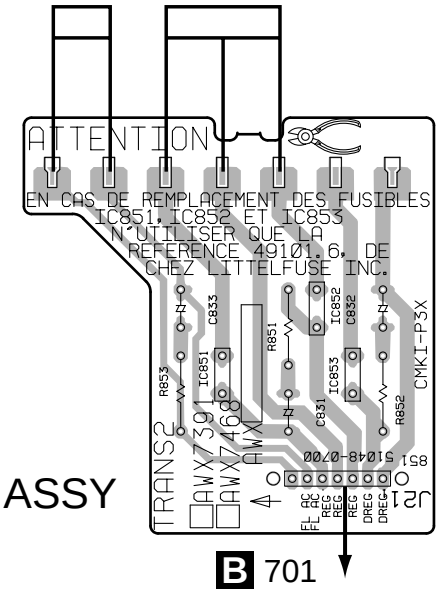
G TRANS1 ASSY



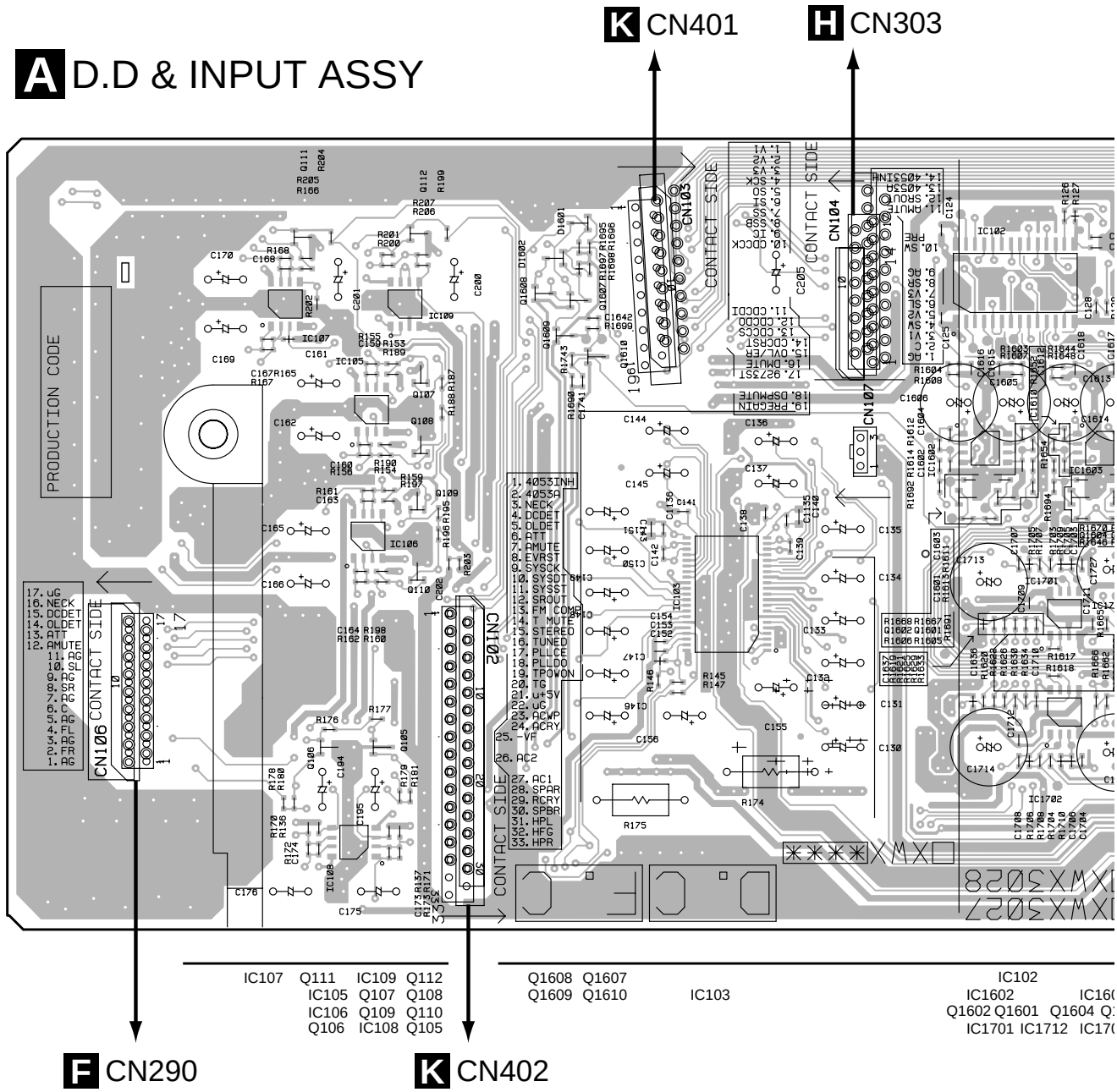
(ANP7331-C)

SIDE A

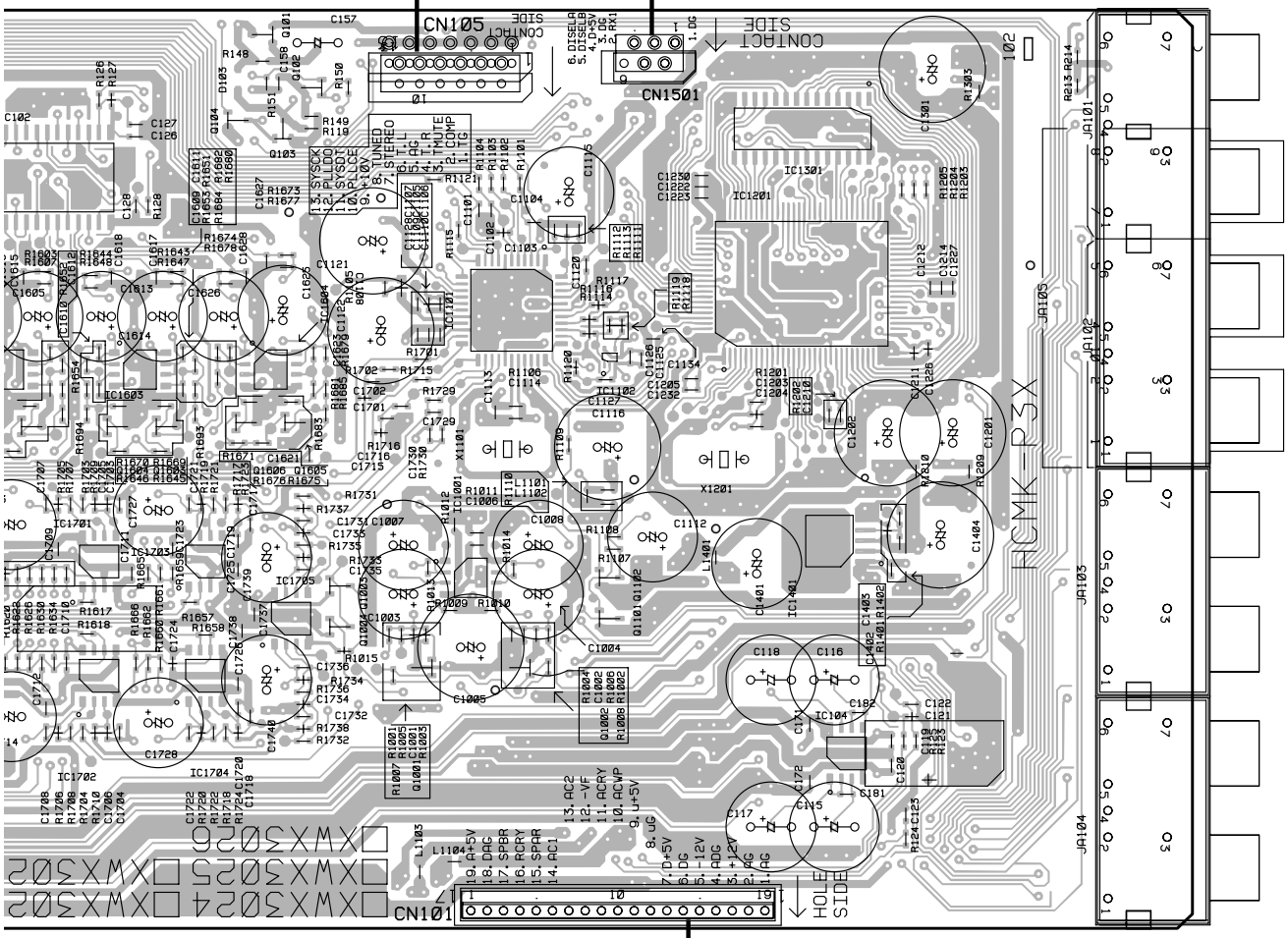
C TRANS2 ASSY



4.3 D.D & INPUT ASSY



FM/AM TUNER UNIT **J** CN1901



IC102
1602 IC1603 IC1604
2 Q1601 Q1604 Q1603 Q1606 Q1605
1701 IC1712 IC1703 IC1704 IC1705 Q1003 Q1004 Q1001 Q1002

Q104 Q101 Q103 Q102 IC1101
IC1001 Q1101 Q1102

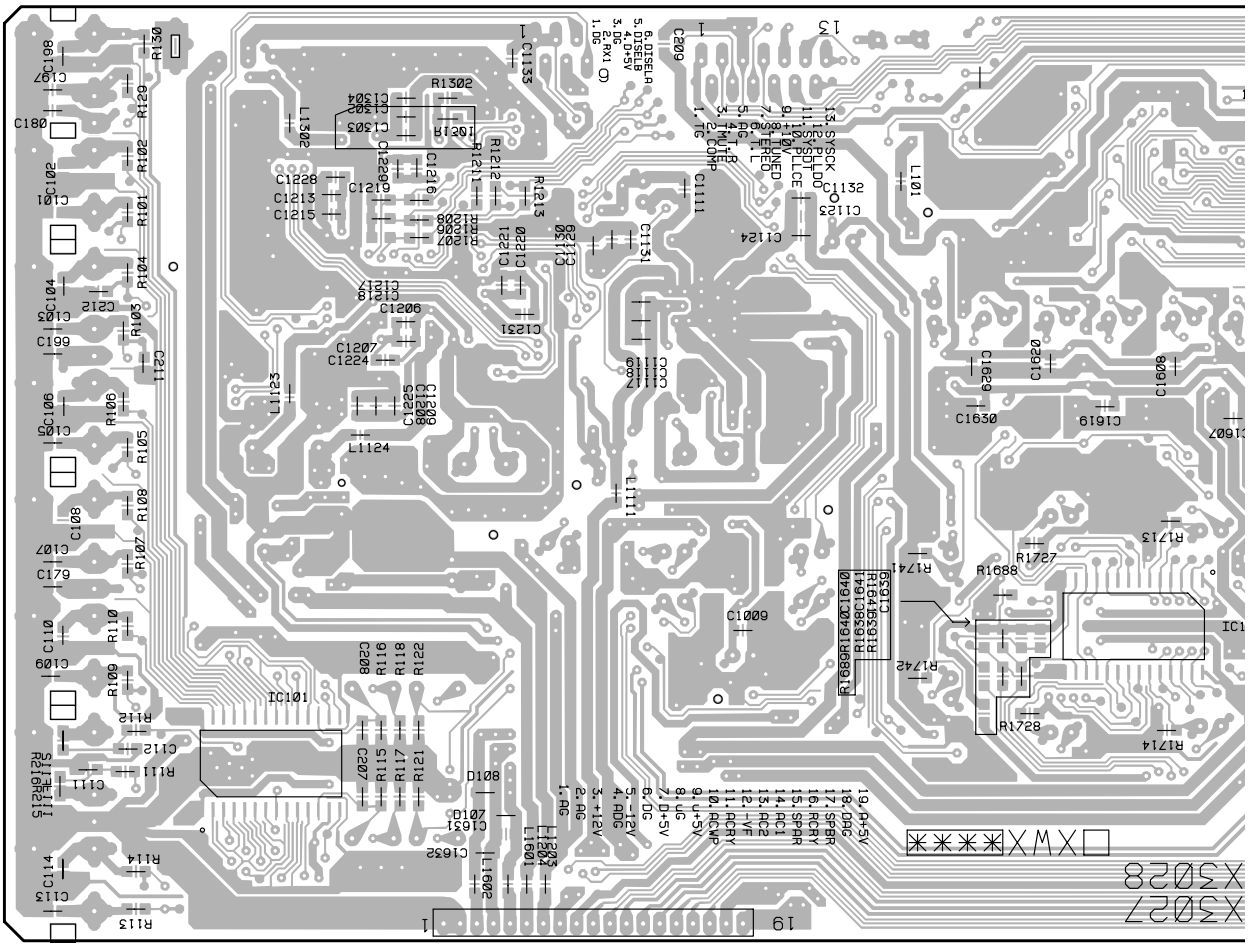
IC1301
IC1201
IC1401
IC104

(XNP3037-A)

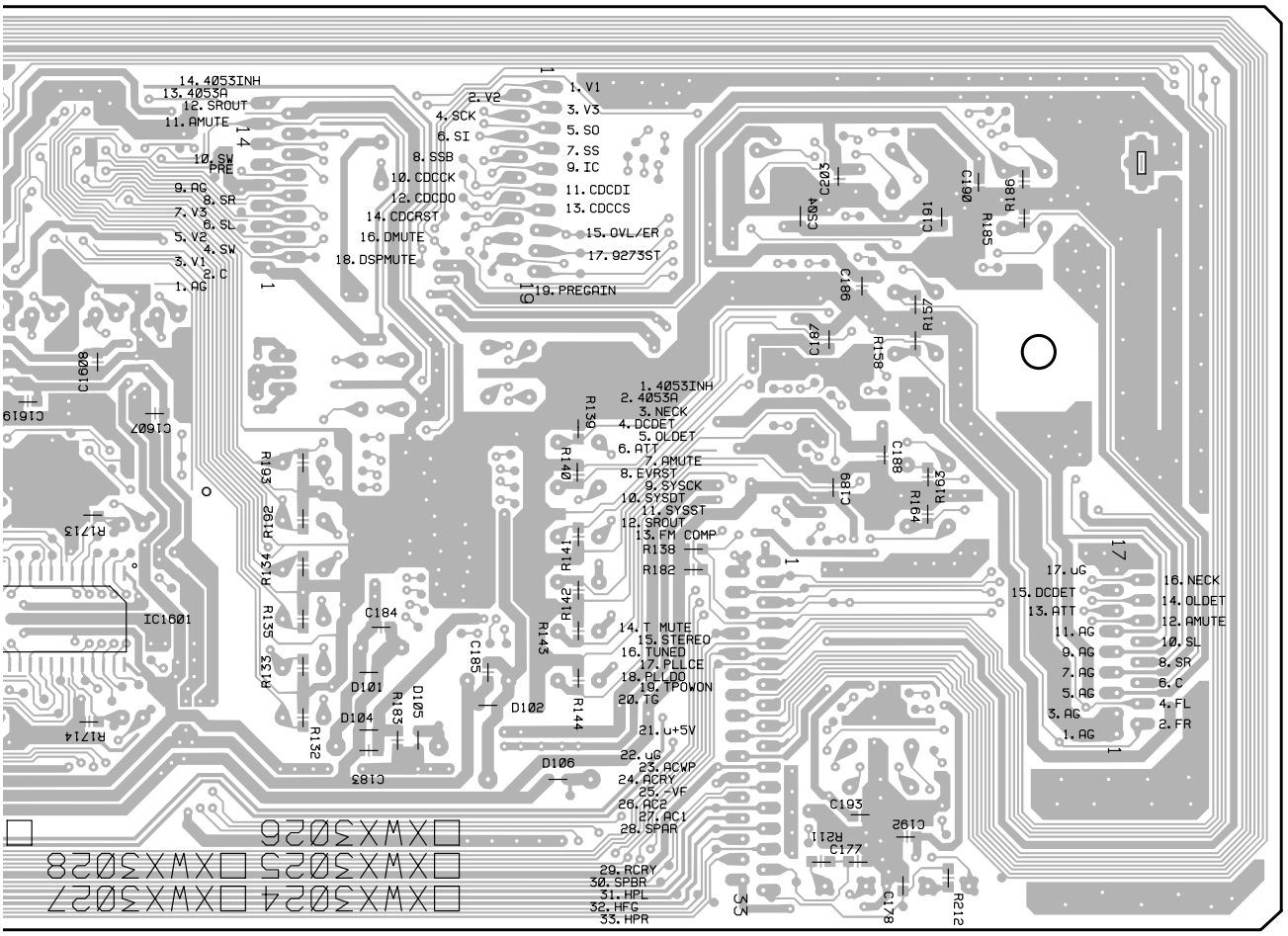
SIDE A

E CN802

A D.D & INPUT ASSY



IC101 IC1601

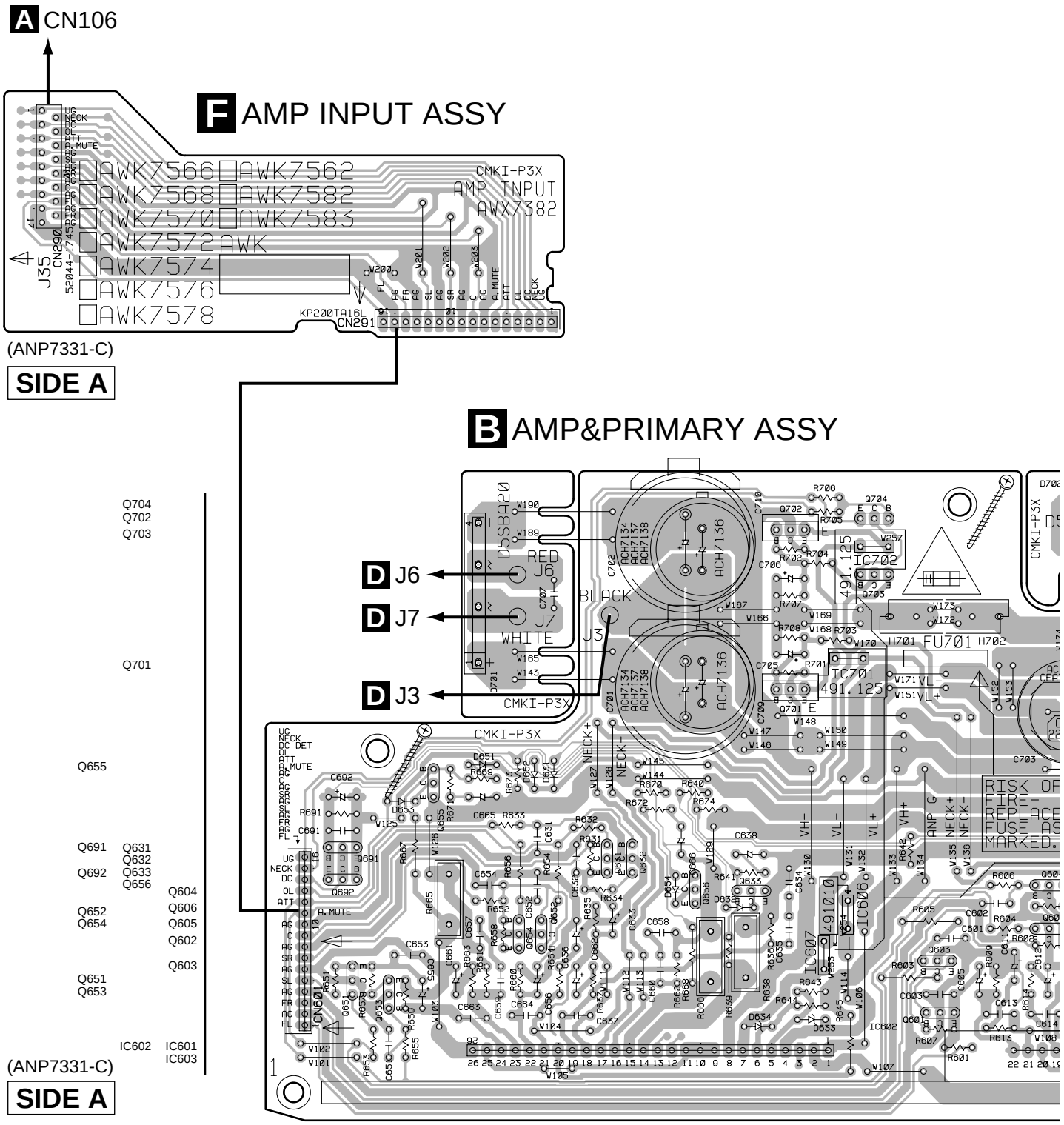


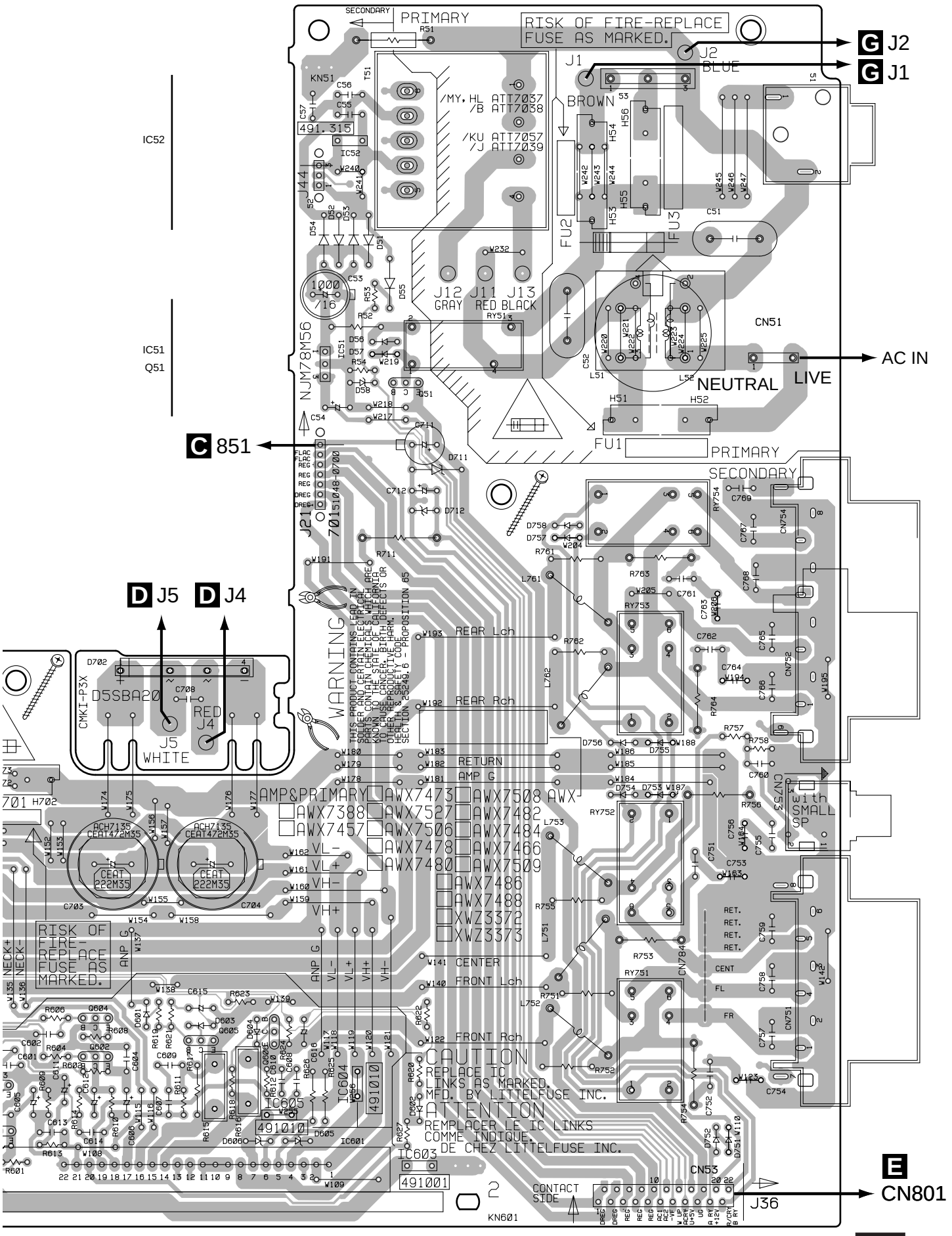
IC1601

(XNP3037-A)

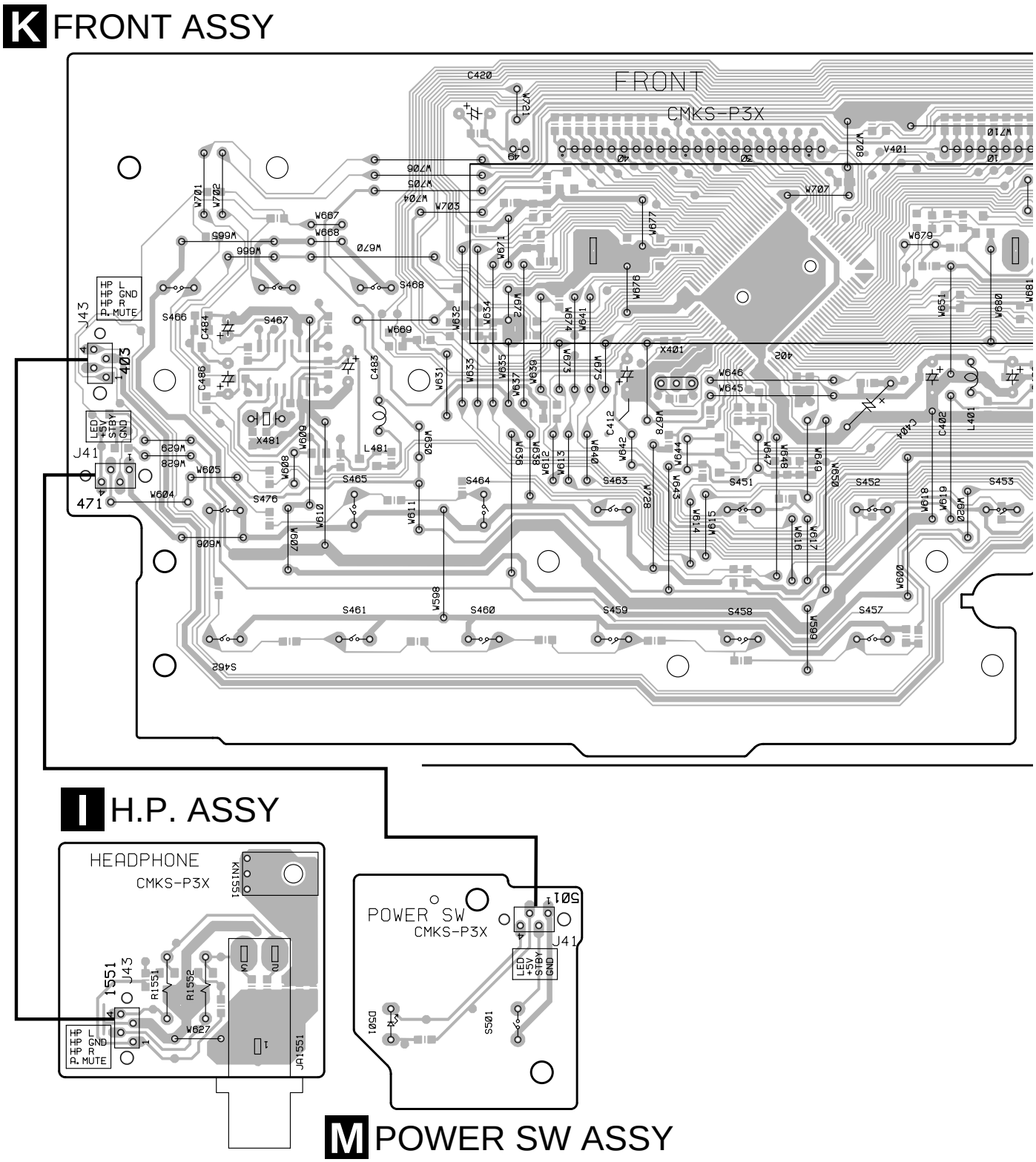
SIDE B

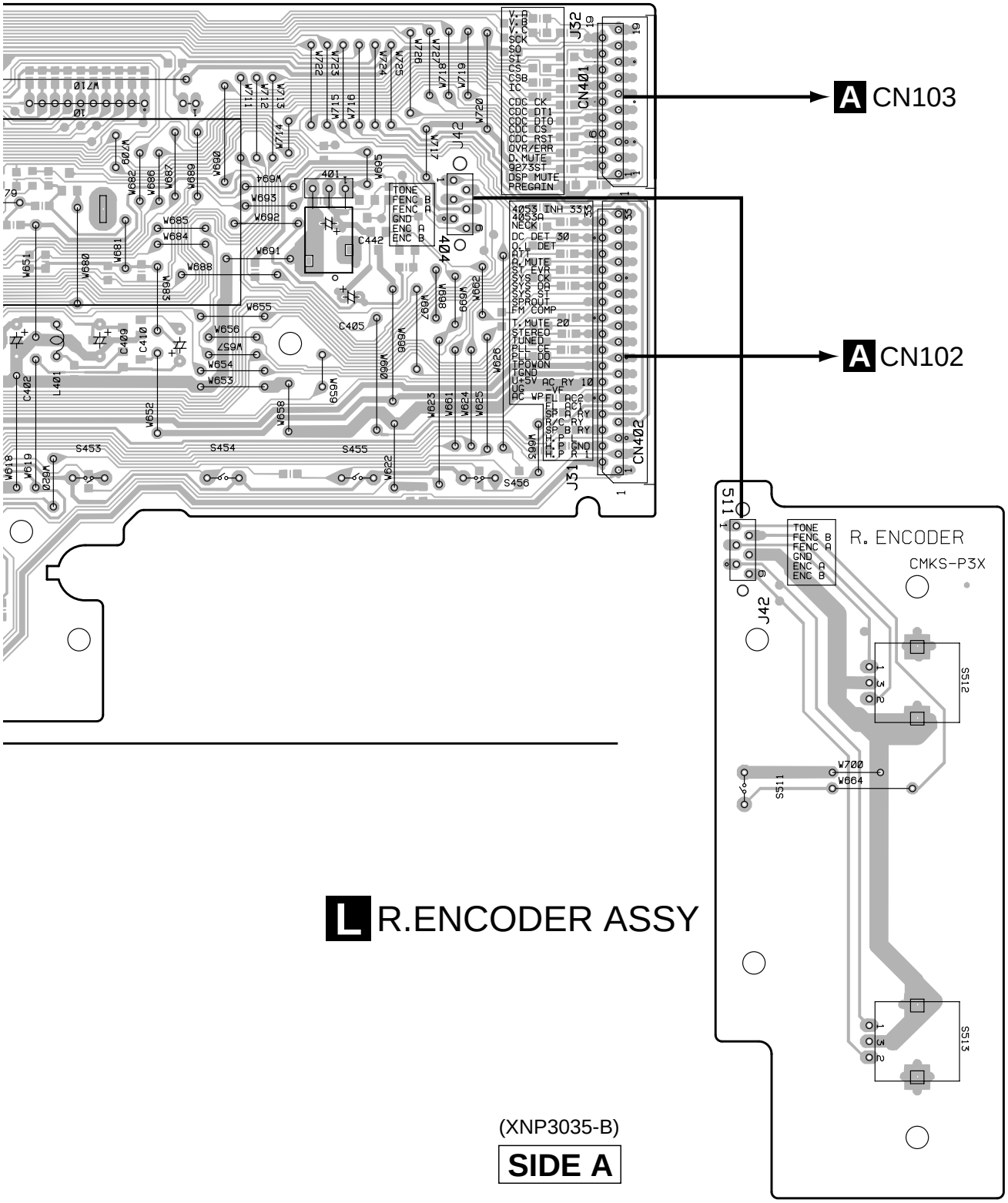
4.4 AMP INPUT and AMP&PRIMARY ASSYS



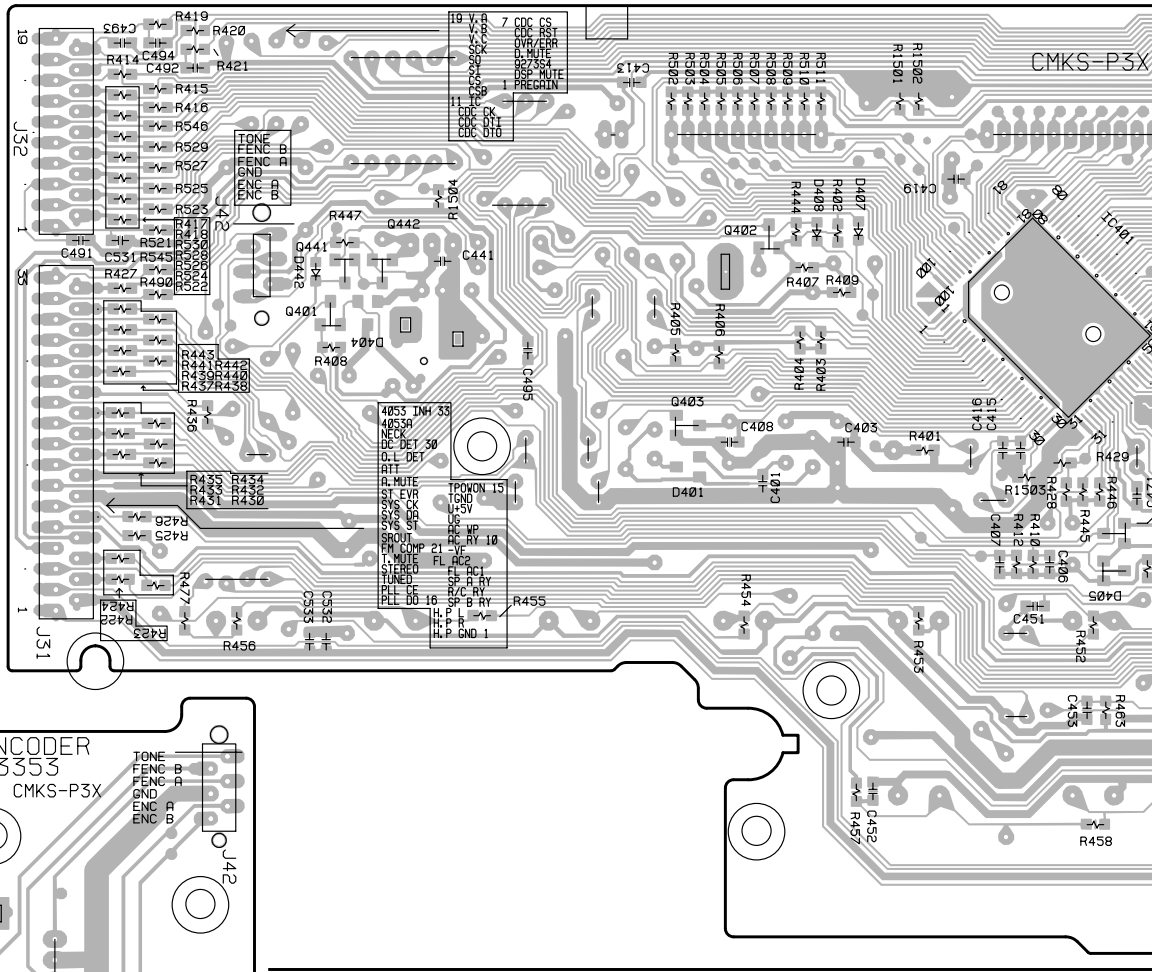

SECONDARY
PRIMARY
RISK OF FIRE-REPLACE FUSE AS MARKED.
J2 BLUE
J1
BROWN
/MY, HL ATT7037 /B ATT7038
/KU ATT7057 /J ATT7039
491.315
IC52
IC51
Q51
NJM78M56
1000 /16
J12 J11 J13
GRAY RED BLACK
CN51
AC IN
NEUTRAL
LIVE
FU1
FU2
FU3
PRIMARY
SECONDARY
C 851
J2115151048-0700
D5SBA20
CMKI-P3X
J5 WHITE
J4 RED
WARNING
REAR Lch
REAR Rch
RETURN
AMP G
FRONT Lch
FRONT Rch
CENTER
VL-
VL+
VH-
VH+
AMP&PRIMARY
AWX7473 AWX7508 AWX
AWX7388 AWX7527 AWX7482
AWX7457 AWX7506 AWX7484
AWX7478 AWX7466
AWX7480 AWX7509
AWX7486
AWX7488
XWZ3372
XWZ3373
ACH7135 CEAT472M35
CEAT 222M35
RISK OF FIRE-REPLACE FUSE AS MARKED.
CAUTION
REPLACE IC LINKS AS MARKED. MFD. BY LITTELFUSE INC.
ATTENTION
REMPLACER LE IC LINKS COMME INDIQUE. DE CHEZ LITTELFUSE INC.
IC604
IC605
IC601
IC603
491010
491001
CN753 with SMALL SP
CN801
J36
CN53
CONTACT SIDE
KN601
D 851
D J5
D J4
E CN801

4.5 H.P., FRONT, R.ENCODER and POWER SW ASSYS

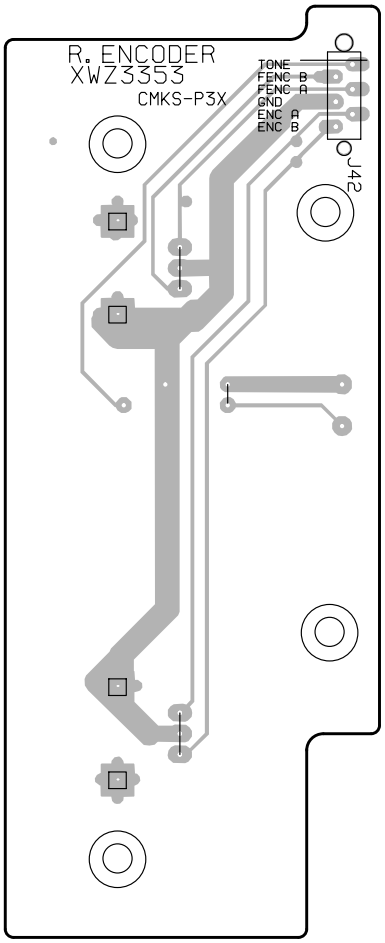



A CN103
A CN102
L R.ENCODER ASSY
R. ENCODER
CMKS-P3X
(XNP3035-B)
SIDE A

K FRONT ASSY

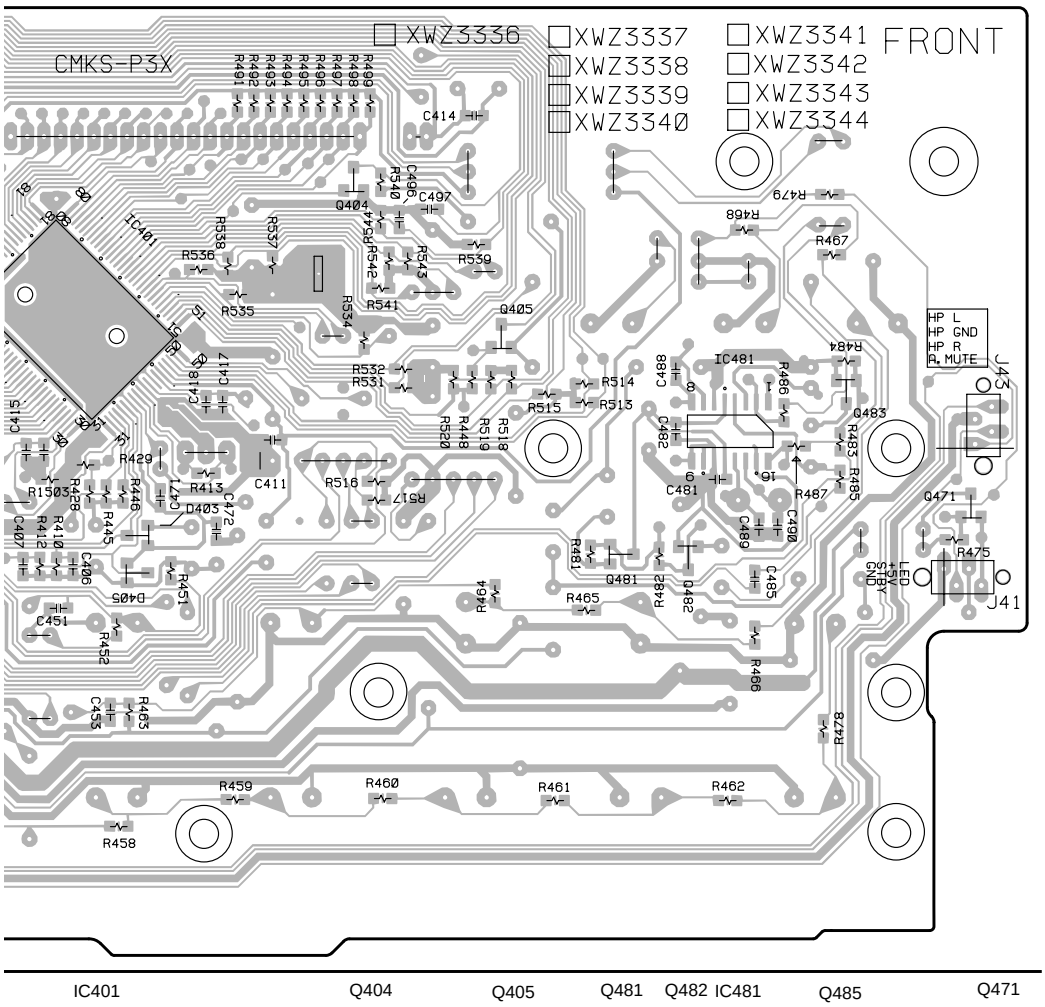


L R.ENCODER ASSY

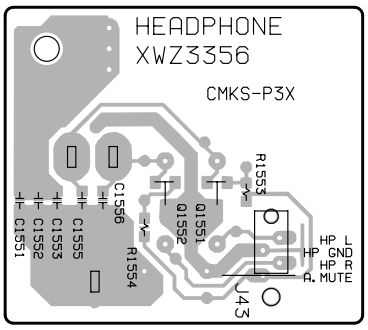


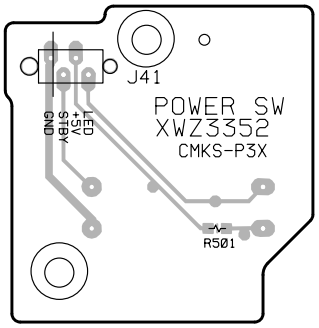
(XNP3035-B)

SIDE B



I H.P. ASSY

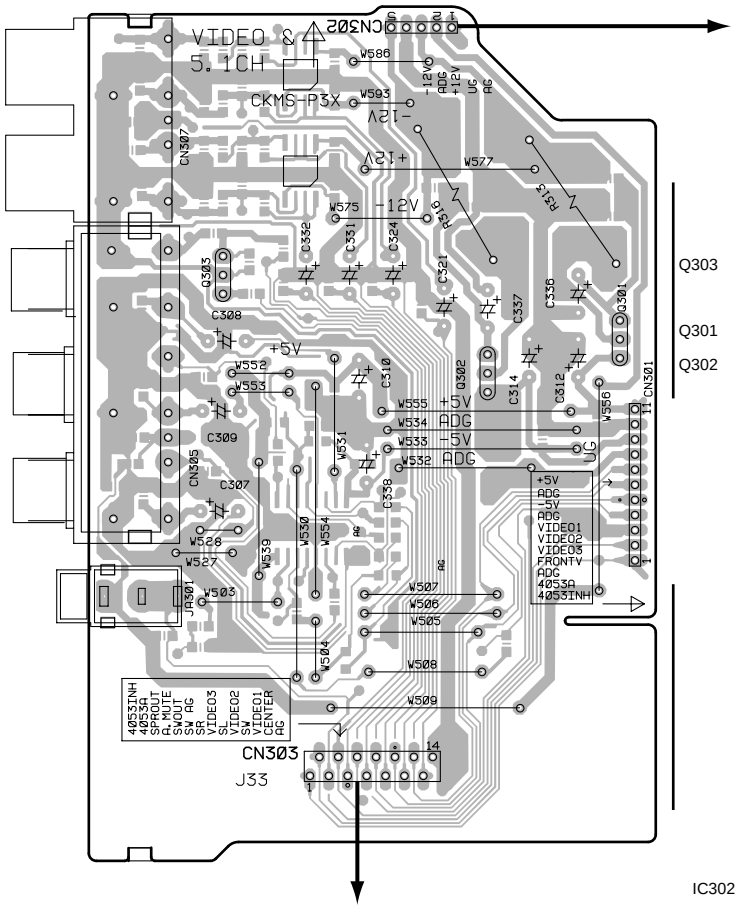




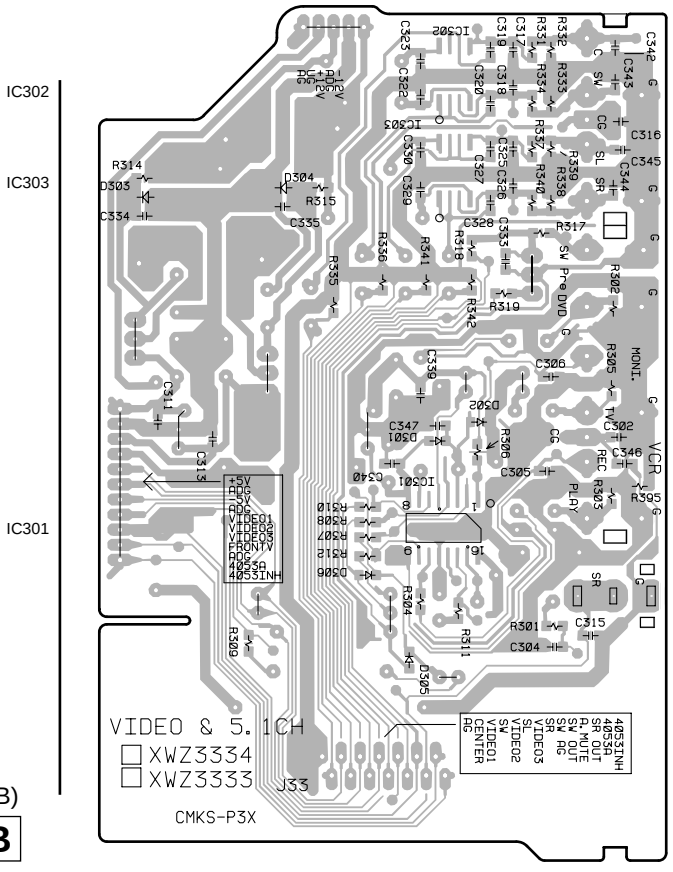
M POWER SW ASSY

4.6 VIDEO&6CH IN ASSY

H VIDEO&6CH IN ASSY



H VIDEO&6CH IN ASSY



5. PCB PARTS LIST

NOTES :
- *Parts marked by "* NSP *" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 *When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).*

560 Ω → 56 × 10 [1] → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 × 10 [3] → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K

Ex. 2 *When there are 3 effective digits (such as in high precision metal film resistors).*

5.62k Ω → 562 × 10 [1] → 5621 ..... RN1/4PC 5 6 2 1 F

LIST OF PCB ASSEMBLIES

Mark	No.	Description	Part No.
NSP		COMPLEX ASSY	XWK3001
		├ POWER SW ASSY	XWZ3352
		├ R.ENCODER ASSY	XWZ3353
		├ VIDEO&6CH IN ASSY	XWZ3333
		├ DIGITAL IN ASSY	XWZ3360
		├ FRONT ASSY	XWZ3336
NSP		└ H.P. ASSY	XWZ3356
NSP		AMP&PS ASSY	XWK3015
NSP		├ AMP INPUT ASSY	AWX7382
		├ AMP&PRIMARY ASSY	XWZ3372
		├ REGULATOR ASSY	AWX7493
		├ TRANS2 ASSY	AWX7468
NSP		├ TRANS1 ASSY	AWX7390
NSP		└ TRANS3 ASSY	AWX7392
		D.D & INPUT ASSY	XWX3024

A D.D & INPUT ASSY

SEMICONDUCTORS

IC1001	OP-AMP IC	NJM2100M
IC101	ANALOG SWITCH IC	TC9273F-007
IC102	E-SW IC	TC9163AF
IC103	E-VR IC	M62446FP
IC104	OP-AMP IC	UPC4570G2-TFB
IC105	OP-AMP IC	UPC4570G2-TFB
IC106	OP-AMP IC	UPC4570G2-TFB
IC107	OP-AMP IC	UPC4570G2-TFB
IC108	OP-AMP IC	M5216FP
IC1101	MULTI CH CODEC IC	CS4226-KQ(J)
IC1201	DTS DECORDER IC	YSS912C
IC1301	SRAM	IS61C256AH-15J
IC1401	REGULATOR IC	PQ20WZ51
IC1601	E-SW IC	TC9164AF
IC1602	IC	NJM4558MD
IC1603	IC	NJM4558MD
IC1604	IC	NJM4558MD
IC1701	IC	NJM4558MD
IC1702	IC	NJM4558MD
IC1703	IC	NJM4558MD
IC1704	IC	NJM4558MD
IC1705	IC	NJM4558MD
Q 1001	CHIP MUTING TR	2SC3326
Q 1002	CHIP MUTING TR	2SC3326
Q 1003	CHIP DIGITAL TRANS.	DTA124EK
Q 1004	DIGITAL TRANSISTOR	DTC124EK
Q 101	CHIP TRANSISTOR	2SC2412K
Q 103	TRANSISTOR	DTA143EK
Q 104	DIGITAL TRANSISTOR	DTC124EK
Q 105	CHIP MUTING TR	2SC3326
Q 106	CHIP MUTING TR	2SC3326
Q 107	CHIP MUTING TR	2SC3326
Q 108	CHIP MUTING TR	2SC3326
Q 109	CHIP MUTING TR	2SC3326
Q 110	CHIP MUTING TR	2SC3326
Q 1101	CHIP DIGITAL TRANS.	DTA124EK
Q 1102	DIGITAL TRANSISTOR	DTC124EK
Q 111	CHIP MUTING TR	2SC3326
Q 112	CHIP MUTING TR	2SC3326
Q 1601	CHIP MUTING TR	2SC3326
Q 1602	CHIP MUTING TR	2SC3326
Q 1603	CHIP MUTING TR	2SC3326
Q 1604	CHIP MUTING TR	2SC3326
Q 1605	CHIP MUTING TR	2SC3326
Q 1606	CHIP MUTING TR	2SC3326
Q 1607	CHIP DIGITAL TRANS.	DTA124EK
Q 1608	CHIP DIGITAL TRANS.	DTA124EK
Q 1609	DIGITAL TRANSISTOR	DTC124EK
Q 1610	CHIP DIGITAL TRANS.	DTA124EK
D 101	CHIP ZENER DIODE	UDZS6.8B
D 102	CHIP ZENER DIODE	UDZS6.8B
D 103	DIODE	1SS355
D 104	CHIP ZENER DIODE	UDZS5.1B
D 105	DIODE	1SS355
D 106	DIODE	1SS355
D 1601	DIODE	1SS181
D 1602	DIODE	1SS181

COILS AND FILTERS

L 101	CHIP SOLID INDUCTOR	QTL1013
L 1101	CHIP SOLID INDUCTOR	QTL1013
L 1102	CHIP SOLID INDUCTOR	QTL1013
L 1103	CHIP SOLID INDUCTOR	QTL1013
L 1104	CHIP SOLID INDUCTOR	QTL1013
L 1111	CHIP SOLID INDUCTOR	QTL1013
L 1123	CHIP SOLID INDUCTOR	QTL1013
L 1124	CHIP SOLID INDUCTOR	QTL1013
L 1203	CHIP SOLID INDUCTOR	QTL1013
L 1204	CHIP SOLID INDUCTOR	QTL1013
L 1302	CHIP SOLID INDUCTOR	QTL1013
L 1401	CHIP SOLID INDUCTOR	ATL7002

Mark	No.	Description	Part No.
	L 1601	CHIP SOLID INDUCTOR	QTL1013
	L 1602	CHIP SOLID INDUCTOR	QTL1013

CAPACITORS

	C 1001	CERAMIC CAPACITOR	CCSRCH101J50
	C 1002	CERAMIC CAPACITOR	CCSRCH101J50
	C 1003	ELECT. CAPACITOR	CEAT4R7M50
	C 1004	ELECT. CAPACITOR	CEAT4R7M50
	C 1005	ELECT. CAPACITOR	CEAT221M6R3
	C 1006	CHIP CERAMIC C.	CKSRYB103K50
	C 1007	ELECT. CAPACITOR	CEJQNP100M10
	C 1008	ELECT. CAPACITOR	CEJQNP100M10
	C 1009	CERAMIC CAPACITOR	CKSRYF104Z25
	C 101	CERAMIC CAPACITOR	CCSRCH101J50
	C 102	CERAMIC CAPACITOR	CCSRCH101J50
	C 103	CERAMIC CAPACITOR	CCSRCH101J50
	C 104	CERAMIC CAPACITOR	CCSRCH101J50
	C 105	CERAMIC CAPACITOR	CCSRCH101J50
	C 106	CERAMIC CAPACITOR	CCSRCH101J50
	C 107	CERAMIC CAPACITOR	CCSRCH101J50
	C 108	CERAMIC CAPACITOR	CCSRCH101J50
	C 109	CERAMIC CAPACITOR	CCSRCH101J50
	C 110	CERAMIC CAPACITOR	CCSRCH101J50
	C 1101	CHIP CERAMIC C.	CCSRCH471J50
	C 1102	CERAMIC CAPACITOR	CCSRCH102J50
	C 1103	CERAMIC CAPACITOR	CCSRCH390J50
	C 1104	CERAMIC CAPACITOR	CCSRCH390J50
	C 1105	CERAMIC CAPACITOR	CKSRYF104Z16
	C 1106	CHIP CERAMIC C.	CCSRCH471J50
	C 1107	CHIP CERAMIC C.	CKSRYB223K50
	C 1108	CERAMIC CAPACITOR	CKSQYB224K16
	C 1109	CERAMIC CAPACITOR	CKSRYF104Z16
	C 111	CERAMIC CAPACITOR	CCSRCH101J50
	C 1110	CHIP CERAMIC C.	CCSRCH471J50
	C 1111	CERAMIC CAPACITOR	CKSRYF104Z25
	C 1112	ELECT. CAPACITOR	CEAT1R0M50
	C 1113	CERAMIC CAPACITOR	CCSRCH180J50
	C 1114	CERAMIC CAPACITOR	CCSRCH180J50
	C 1115	ELECT. CAPACITOR	CEATR47M50
	C 1116	ELECT. CAPACITOR	CEAT101M50
	C 1117	CERAMIC CAPACITOR	CKSRYF104Z25
	C 1118	CHIP CERAMIC C.	CCSRCH471J50
	C 1119	CHIP CERAMIC C.	CCSRCH271J50
	C 112	CERAMIC CAPACITOR	CCSRCH101J50
	C 1121	ELECT. CAPACITOR	CEAT101M10
	C 1122	ELECT. CAPACITOR	CEAT101M10
	C 1123	CHIP CERAMIC C.	CCSRCH331J50
	C 1124	CHIP CERAMIC C.	CCSRCH331J50
	C 1128	CHIP CERAMIC C.	CKSRYB103K50
	C 1129	CHIP CERAMIC C.	CKSRYB103K50
	C 113	CERAMIC CAPACITOR	CCSRCH101J50
	C 1130	CHIP CERAMIC C.	CCSRCH471J50
	C 1132	CHIP CERAMIC C.	CKSRYB103K50
	C 1133	CERAMIC CAPACITOR	CKSRYF104Z25
	C 1134	CHIP CERAMIC C.	CKSRYB103K50
	C 1135	CERAMIC CAPACITOR	CKSRYB104K16
	C 1136	CERAMIC CAPACITOR	CKSRYB104K16
	C 114	CERAMIC CAPACITOR	CCSRCH101J50
	C 115	ELECT. CAPACITOR	CEAT4R7M50
	C 116	ELECT. CAPACITOR	CEAT4R7M50
	C 117	ELECT. CAPACITOR	CEAT470M25
	C 118	ELECT. CAPACITOR	CEAT470M25
	C 119	CHIP CERAMIC C.	CKSRYB103K50
	C 120	CHIP CERAMIC C.	CKSRYB103K50
	C 1201	ELECT. CAPACITOR	CEAT101M10
	C 1202	ELECT. CAPACITOR	CEAT221M6R3
	C 1203	CHIP CERAMIC C.	CCSRCH200J50
	C 1204	CHIP CERAMIC C.	CCSRCH200J50
	C 1205	CHIP CERAMIC C.	CKSRYB103K50
	C 1206	CHIP CERAMIC C.	CKSRYB103K50
	C 1207	CERAMIC CAPACITOR	CCSRCH101J50
	C 1208	CHIP CERAMIC C.	CKSRYB103K50
	C 1209	CERAMIC CAPACITOR	CCSRCH101J50
	C 121	CERAMIC CAPACITOR	CCSRCH101J50
	C 1210	CHIP CERAMIC C.	CCSRCH471J50
	C 1211	CHIP CERAMIC C.	CKSRYB103K50
	C 1212	CERAMIC CAPACITOR	CCSRCH101J50
	C 1213	CERAMIC CAPACITOR	CCSRCH101J50
	C 1214	CHIP CERAMIC C.	CKSRYB103K50
	C 1215	CHIP CERAMIC C.	CKSRYB103K50
	C 1216	CHIP CERAMIC C.	CKSRYB103K50
	C 1217	CERAMIC CAPACITOR	CCSRCH101J50
	C 1218	CERAMIC CAPACITOR	CCSRCH101J50
	C 1219	CERAMIC CAPACITOR	CKSRYF104Z25
	C 122	CERAMIC CAPACITOR	CCSRCH101J50
	C 1220	CHIP CERAMIC C.	CKSRYB103K50
	C 1221	CERAMIC CAPACITOR	CCSRCH101J50
	C 1222	CHIP CERAMIC C.	CKSRYB103K50
	C 1223	CERAMIC CAPACITOR	CCSRCH101J50
	C 1224	CERAMIC CAPACITOR	CKSRYF104Z25
	C 1225	CERAMIC CAPACITOR	CKSRYF104Z25
	C 1226	CERAMIC CAPACITOR	CKSRYF104Z16
	C 1227	CERAMIC CAPACITOR	CKSRYF104Z16
	C 1228	CERAMIC CAPACITOR	CKSRYF104Z25
	C 1229	CERAMIC CAPACITOR	CKSRYF104Z25
	C 123	CERAMIC CAPACITOR	CCSRCH101J50
	C 1230	CERAMIC CAPACITOR	CKSRYF104Z16
	C 1231	CERAMIC CAPACITOR	CKSRYF104Z25
	C 1232	CERAMIC CAPACITOR	CKSRYF104Z16
	C 124	CHIP CERAMIC C.	CKSRYB103K50
	C 125	CHIP CERAMIC C.	CKSRYB103K50
	C 126	CERAMIC CAPACITOR	CCSRCH101J50
	C 127	CERAMIC CAPACITOR	CCSRCH101J50
	C 128	CERAMIC CAPACITOR	CCSRCH101J50
	C 130	ELECT. CAPACITOR	CEAT110M50
	C 1301	ELECT. CAPACITOR	CEJA101M10
	C 1302	CHIP CERAMIC C.	CKSRYB103K50
	C 1303	CERAMIC CAPACITOR	CCSRCH101J50
	C 1304	CERAMIC CAPACITOR	CKSRYF104Z25
	C 131	ELECT. CAPACITOR	CEAT100M50
	C 132	ELECT. CAPACITOR	CEAT100M50
	C 133	ELECT. CAPACITOR	CEAT100M50
	C 134	ELECT. CAPACITOR	CEAT100M50
	C 135	ELECT. CAPACITOR	CEAT100M50
	C 136	ELECT. CAPACITOR	CEAT100M50
	C 137	ELECT. CAPACITOR	CEAT100M50
	C 138	CHIP CERAMIC C.	CKSRYB822K50
	C 139	CHIP CERAMIC C.	CKSRYB153K50
	C 140	CERAMIC CAPACITOR	CKSQYB224K16
	C 1401	ELECT. CAPACITOR	CEAT4R7M50
	C 1404	ELECT. CAPACITOR	CEAT101M10
	C 141	CHIP CERAMIC C.	CKSRYB822K50
	C 142	CHIP CERAMIC C.	CKSRYB153K50
	C 143	CERAMIC CAPACITOR	CKSQYB224K16

Mark	No.	Description	Part No.
	C 144	ELECT. CAPACITOR	CEAT3R3M50
	C 145	ELECT. CAPACITOR	CEAT3R3M50
	C 146	ELECT. CAPACITOR	CEAT100M50
	C 147	ELECT. CAPACITOR	CEAT3R3M50
	C 148	ELECT. CAPACITOR	CEAT3R3M50
	C 149	ELECT. CAPACITOR	CEAT3R3M50
	C 150	ELECT. CAPACITOR	CEAT3R3M50
	C 151	ELECT. CAPACITOR	CEAT3R3M50
	C 152	CERAMIC CAPACITOR	CCSRCH101J50
	C 153	CERAMIC CAPACITOR	CCSRCH101J50
	C 154	CERAMIC CAPACITOR	CCSRCH101J50
	C 155	ELECT. CAPACITOR	CEAT471M10
	C 156	ELECT. CAPACITOR	CEAT471M10
	C 157	ELECT. CAPACITOR	CEAT101M16
	C 159	CERAMIC CAPACITOR	CCSRCH101J50
	C 160	CERAMIC CAPACITOR	CCSRCH101J50
	C 1601	CHIP CERAMIC C.	CCSRCH221J50
	C 1602	CHIP CERAMIC C.	CCSRCH221J50
	C 1603	CHIP CERAMIC C.	CCSRCH471J50
	C 1604	CHIP CERAMIC C.	CCSRCH471J50
	C 1605	ELECT. CAPACITOR	CEAT4R7M50
	C 1606	ELECT. CAPACITOR	CEAT4R7M50
	C 1607	CHIP CERAMIC C.	CKSRYB103K50
	C 1608	CHIP CERAMIC C.	CKSRYB103K50
	C 1609	CHIP CERAMIC C.	CCSRCH221J50
	C 161	ELECT. CAPACITOR	CEAT470M25
	C 1610	CHIP CERAMIC C.	CCSRCH221J50
	C 1611	CHIP CERAMIC C.	CCSRCH471J50
	C 1612	CHIP CERAMIC C.	CCSRCH471J50
	C 1613	ELECT. CAPACITOR	CEAT4R7M50
	C 1614	ELECT. CAPACITOR	CEAT4R7M50
	C 1615	CHIP CERAMIC C.	CKSRYB222K50
	C 1616	CHIP CERAMIC C.	CKSRYB222K50
	C 1617	CHIP CERAMIC C.	CKSRYB222K50
	C 1618	CHIP CERAMIC C.	CKSRYB222K50
	C 1619	CHIP CERAMIC C.	CKSRYB103K50
	C 162	ELECT. CAPACITOR	CEAT470M25
	C 1620	CHIP CERAMIC C.	CKSRYB103K50
	C 1621	CHIP CERAMIC C.	CKSRYB122K50
	C 1623	CHIP CERAMIC C.	CCSRCH271J50
	C 1625	ELECT. CAPACITOR	CEAT4R7M50
	C 1626	ELECT. CAPACITOR	CEAT4R7M50
	C 1627	CHIP CERAMIC C.	CKSRYB222K50
	C 1628	CERAMIC CAPACITOR	CKSRYF104Z50
	C 1629	CHIP CERAMIC C.	CKSRYB103K50
	C 163	CERAMIC CAPACITOR	CCSRCH101J50
	C 1630	CHIP CERAMIC C.	CKSRYB103K50
	C 1631	CERAMIC CAPACITOR	CKSRYF104Z25
	C 1632	CERAMIC CAPACITOR	CKSRYF104Z25
	C 1636	CHIP CERAMIC C.	CKSRYB103K50
	C 1637	CHIP CERAMIC C.	CKSRYB103K50
	C 1639	CHIP CERAMIC C.	CCSRCH471J50
	C 164	CERAMIC CAPACITOR	CCSRCH101J50
	C 1640	CERAMIC CAPACITOR	CCSRCH101J50
	C 1641	CERAMIC CAPACITOR	CCSRCH101J50
	C 1642	CHIP CERAMIC C.	CKSRYB103K50
	C 165	ELECT. CAPACITOR	CEAT470M25
	C 166	ELECT. CAPACITOR	CEAT470M25
	C 167	CHIP CERAMIC C.	CCSRCH221J50
	C 168	CERAMIC CAPACITOR	CKSRYB152K50
	C 169	ELECT. CAPACITOR	CEAT470M25
	C 170	ELECT. CAPACITOR	CEAT4R7M50

Mark	No.	Description	Part No.
	C 1701	CERAMIC CAPACITOR	CKSRYB682K50
	C 1702	CERAMIC CAPACITOR	CKSRYB682K50
	C 1703	CHIP CERAMIC C.	CKSRYB222K50
	C 1704	CHIP CERAMIC C.	CKSRYB222K50
	C 1705	CERAMIC CAPACITOR	CKSRYB104K16
	C 1706	CERAMIC CAPACITOR	CKSRYB104K16
	C 1707	CHIP CERAMIC C.	CCSRCH151J50
	C 1708	CHIP CERAMIC C.	CCSRCH151J50
	C 1709	CHIP CERAMIC C.	CKSRYB103K50
	C 171	CHIP CERAMIC C.	CKSRYB103K50
	C 1710	CHIP CERAMIC C.	CKSRYB103K50
	C 1711	CHIP CERAMIC C.	CKSRYB103K50
	C 1712	CHIP CERAMIC C.	CKSRYB103K50
	C 1713	ELECT. CAPACITOR	CEAT220M25
	C 1714	ELECT. CAPACITOR	CEAT220M25
	C 1715	CERAMIC CAPACITOR	CKSRYB682K50
	C 1716	CERAMIC CAPACITOR	CKSRYB682K50
	C 1717	CHIP CERAMIC C.	CKSRYB222K50
	C 1718	CHIP CERAMIC C.	CKSRYB222K50
	C 1719	CERAMIC CAPACITOR	CKSRYB104K16
	C 172	CHIP CERAMIC C.	CKSRYB103K50
	C 1720	CERAMIC CAPACITOR	CKSRYB104K16
	C 1721	CHIP CERAMIC C.	CCSRCH151J50
	C 1722	CHIP CERAMIC C.	CCSRCH151J50
	C 1723	CHIP CERAMIC C.	CKSRYB103K50
	C 1724	CHIP CERAMIC C.	CKSRYB103K50
	C 1725	CHIP CERAMIC C.	CKSRYB103K50
	C 1726	CHIP CERAMIC C.	CKSRYB103K50
	C 1727	ELECT. CAPACITOR	CEAT220M25
	C 1728	ELECT. CAPACITOR	CEAT220M25
	C 1729	CERAMIC CAPACITOR	CKSRYB682K50
	C 173	CHIP CERAMIC C.	CCSRCH151J50
	C 1731	CHIP CERAMIC C.	CKSRYB222K50
	C 1732	CERAMIC CAPACITOR	CKSRYB682K50
	C 1733	CERAMIC CAPACITOR	CKSRYB104K16
	C 1734	CERAMIC CAPACITOR	CKSRYB104K16
	C 1735	CHIP CERAMIC C.	CCSRCH151J50
	C 1736	CERAMIC CAPACITOR	CCSRCH102J50
	C 1737	CHIP CERAMIC C.	CKSRYB103K50
	C 1738	CHIP CERAMIC C.	CKSRYB103K50
	C 1739	ELECT. CAPACITOR	CEAT220M25
	C 174	CHIP CERAMIC C.	CCSRCH151J50
	C 1740	ELECT. CAPACITOR	CEAT220M25
	C 175	ELECT. CAPACITOR	CEAT101M16
	C 176	ELECT. CAPACITOR	CEAT101M16
	C 177	CHIP CERAMIC C.	CKSRYB103K50
	C 178	CHIP CERAMIC C.	CKSRYB103K50
	C 179	CHIP CERAMIC C.	CKSRYB103K50
	C 180	CHIP CERAMIC C.	CKSRYB103K50
	C 183	CHIP CERAMIC C.	CKSRYB103K50
	C 184	CERAMIC CAPACITOR	CKSRYF473Z50
	C 185	CERAMIC CAPACITOR	CKSRYF473Z50
	C 186	CHIP CERAMIC C.	CKSRYB103K50
	C 187	CHIP CERAMIC C.	CKSRYB103K50
	C 188	CHIP CERAMIC C.	CKSRYB103K50
	C 189	CHIP CERAMIC C.	CKSRYB103K50
	C 190	CHIP CERAMIC C.	CKSRYB103K50
	C 191	CHIP CERAMIC C.	CKSRYB103K50
	C 192	CHIP CERAMIC C.	CKSRYB103K50
	C 193	CHIP CERAMIC C.	CKSRYB103K50
	C 194	ELECT. CAPACITOR	CEAT4R7M50
	C 195	ELECT. CAPACITOR	CEAT4R7M50

Mark	No.	Description	Part No.
	C 199	CHIP CERAMIC C.	CKSRYB103K50
	C 201	ELECT. CAPACITOR	CEAT4R7M50
	C 202	CERAMIC CAPACITOR	CKSRYF104Z16
	C 205	ELECT. CAPACITOR	CEAT3R3M50
	C 207	CERAMIC CAPACITOR	CCSRCH101J50
	C 208	CERAMIC CAPACITOR	CCSRCH101J50
	C 209	CERAMIC CAPACITOR	CKSRYF104Z25

RESISTORS

Mark	No.	Description	Part No.
⚠	R174	METAL OXIDE RESISTOR	RS1LMF101J
⚠	R175	METAL OXIDE RESISTOR	RS1LMF101J
	Other Resistors		RS1/16S□□□J

OTHERS

Mark	No.	Description	Part No.
	CN101	19P SOCKET	KP200TA19L
	CN102	32P CONNECTOR	52045-3345
	CN103	20P CONNECTOR	52045-1945
	CN104	CONNECTOR	52045-1445
	CN105	CONNECTOR	52045-1345
	CN106	CONNECTOR	52045-1745
	CN1501	CONNECTOR 6P	52045-0645
	JA103	PIN JACK(4P)	AKB7048
	JA104	PIN JACK(4P)	AKB7048
	JA105	PIN JACK(6P)	AKB7050
	X1101	CRYSTAL RESONATOR (18.432MHz)	RSS1052
	X1201	CRYSTAL RESONATOR (12.288MHz)	VSS1140

B AMP&PRIMARY ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC51	REGULATOR IC	NJM78M56FA
⚠	IC601	AUDIO IC	PAC010A
⚠	IC602	AUDIO IC	PAC011A
⚠	IC603	PROTECTOR(1A)	AEK7009
⚠	IC604	PROTECTOR(10A)	AEK7022
⚠	IC605	PROTECTOR(10A)	AEK7022
⚠	IC606	PROTECTOR(10A)	AEK7022
⚠	IC607	PROTECTOR(10A)	AEK7022
⚠	IC701	PROTECTOR(125mA)	AEK7020
⚠	IC702	PROTECTOR(125mA)	AEK7020
	Q 51	TRANSISTOR	KRC101M
	Q 601	TRANSISTOR	2SC2878
	Q 602	TRANSISTOR	2SC2878
	Q 603	TRANSISTOR	2SC2878
	Q 604	TRANSISTOR	2SC2878
	Q 605	TRANSISTOR	2SC2240
	Q 606	TRANSISTOR	2SC2240
	Q 631	TRANSISTOR	2SC2878
	Q 632	TRANSISTOR	2SC2878
	Q 633	TRANSISTOR	2SC2240
	Q 651	TRANSISTOR	2SC2878
	Q 652	TRANSISTOR	2SC2878
	Q 653	TRANSISTOR	2SC2878
	Q 654	TRANSISTOR	2SC2878
	Q 655	TRANSISTOR	2SC2240
	Q 656	TRANSISTOR	2SC2240
	Q 691	TRANSISTOR	2SC1740S
	Q 692	TRANSISTOR	2SC1740S
	Q 701	TRANSISTOR	2SC4793
	Q 702	TRANSISTOR	2SA1837
	Q 703	TRANSISTOR	2SA1145
	Q 704	TRANSISTOR	2SC1845
⚠	D 51	DIODE	S5688G
⚠	D 52	DIODE	S5688G
⚠	D 53	DIODE	S5688G
⚠	D 54	DIODE	S5688G
⚠	D 55	DIODE	S5688G
	D 56	DIODE	1SS133
	D 58	ZINER DIODE	MTZJ5.1A
	D 601	DIODE	1SS133
	D 602	DIODE	1SS133
	D 603	DIODE	1SS133
	D 604	DIODE	1SS133
	D 605	ZENER DIODE	MTZJ16A
	D 606	ZENER DIODE	MTZJ16A
	D 631	DIODE	1SS133
	D 632	DIODE	1SS133
	D 633	ZENER DIODE	MTZJ16A
	D 634	ZENER DIODE	MTZJ16A
	D 651	DIODE	1SS133
	D 652	DIODE	1SS133
	D 653	DIODE	1SS133
	D 654	DIODE	1SS133
⚠	D 701	DIODE	D5SBA20(B)
⚠	D 702	DIODE	D5SBA20(B)
	D 711	ZENER DIODE	MTZJ22D
	D 712	ZENER DIODE	MTZJ5.1B
	D 752	DIODE	1SS133
	D 754	DIODE	1SS133
	D 756	DIODE	1SS133

COILS AND FILTERS

Mark	No.	Description	Part No.
⚠	L 51	LINE FILTER	ATF7018
	L 751	COIL	ATH1004
	L 752	COIL	ATH1004
	L 753	COIL	ATH1004
	L 761	COIL	ATH1004
	L 762	COIL	ATH1004

SWITCHES AND RELAYS

Mark	No.	Description	Part No.
⚠	RY51	JOE LOWPOWER RELAY	XSR3003
	RY751	RELAY	XSR3002
	RY752	RELAY	XSR3002
	RY753	RELAY	XSR3002

CAPACITORS

Mark	No.	Description	Part No.
⚠	C51	CKA (10000pF/AC250V)	ACG7020
⚠	C52	CKA (10000pF/AC250V)	ACG7020
	C53	ELECT. CAPACITOR	CEAT102M16
	C54	ELECT. CAPACITOR	CEAT470M25
	C55	CERAMIC CAPACITOR	CGCYX103M25
	C56	CERAMIC CAPACITOR	CGCYX103M25
	C57	CERAMIC CAPACITOR	CGCYX103M25
	C601	CERAMIC CAPACITOR	CKCYB102K50
	C602	CERAMIC CAPACITOR	CKCYB102K50
	C603	CERAMIC CAPACITOR	CKCYB331K50
	C604	CERAMIC CAPACITOR	CKCYB331K50
	C605	ELECT. CAPACITOR	CEAT4R7M50
	C606	ELECT. CAPACITOR	CEAT4R7M50
	C607	CERAMIC CAPACITOR	CCCSL6R0D50
	C608	CERAMIC CAPACITOR	CCCSL6R0D50
	C609	CERAMIC CAPACITOR	CCCSL6R0D50
	C610	CERAMIC CAPACITOR	CCCSL6R0D50

Mark	No.	Description	Part No.
	C611	ELECT. CAPACITOR	CEAT101M16
	C612	ELECT. CAPACITOR	CEAT101M16
	C615	ELECT. CAPACITOR	CEANP2R2M50
	C616	ELECT. CAPACITOR	CEANP2R2M50
	C631	CERAMIC CAPACITOR	CKCYB102K50
	C632	CERAMIC CAPACITOR	CKCYB331K50
	C633	ELECT. CAPACITOR	CEAT4R7M50
	C634	CERAMIC CAPACITOR	CCCSL6R0D50
	C635	CERAMIC CAPACITOR	CCCSL6R0D50
	C636	ELECT. CAPACITOR	CEAT101M16
	C638	ELECT. CAPACITOR	CEANP2R2M50
	C651	CERAMIC CAPACITOR	CKCYB102K50
	C652	CERAMIC CAPACITOR	CKCYB102K50
	C653	CERAMIC CAPACITOR	CKCYB331K50
	C654	CERAMIC CAPACITOR	CKCYB331K50
	C655	ELECT. CAPACITOR	CEAT4R7M50
	C656	ELECT. CAPACITOR	CEAT4R7M50
	C657	CERAMIC CAPACITOR	CCCSL6R0D50
	C658	CERAMIC CAPACITOR	CCCSL6R0D50
	C659	CERAMIC CAPACITOR	CCCSL6R0D50
	C660	CERAMIC CAPACITOR	CCCSL6R0D50
	C661	ELECT. CAPACITOR	CEAT101M16
	C662	ELECT. CAPACITOR	CEAT101M16
	C665	ELECT. CAPACITOR	CEANP2R2M50
	C666	ELECT. CAPACITOR	CEANP2R2M50
	C691	CERAMIC CAPACITOR	CKCYB102K50
	C692	ELECT. CAPACITOR	CEAT221M10
	C701	ELECT.CAPACITOR (4700µF/71V)	ACH7137
	C702	ELECT.CAPACITOR (4700µF/71V)	ACH7137
	C703	ELECT.CAPACITOR (3300µF/42V)	ACH7135
	C704	ELECT.CAPACITOR (3300µF/42V)	ACH7135
	C705	ELECT. CAPACITOR	CEAT100M2A
	C706	ELECT. CAPACITOR	CEAT100M2A
	C707	CKA (0.01µF/AC250V)	ACG1005
	C708	CKA (0.01µF/AC250V)	ACG1005
	C711	ELECT. CAPACITOR	CEAT101M35
	C712	ELECT. CAPACITOR	CEAT101M10
	C751	AUDIO FILM CAPACITOR	CFTYA104J50
	C752	AUDIO FILM CAPACITOR	CFTYA104J50
	C755	AUDIO FILM CAPACITOR	CFTYA104J50
	C761	AUDIO FILM CAPACITOR	CFTYA104J50
	C762	AUDIO FILM CAPACITOR	CFTYA104J50

RESISTORS

Mark	No.	Description	Part No.
⚠	R51	RESISTOR(2.2MΩ/ 1/2W)	RCN1080
⚠	R52	CARBON FILM RESISTOR	RD1/2PM270J
⚠	R615	RESISTOR (0.22Ω/5W)	XCN3001
⚠	R616	RESISTOR (0.22Ω/5W)	XCN3001
⚠	R638	RESISTOR (0.22Ω/5W)	XCN3001
⚠	R665	RESISTOR (0.22Ω/5W)	XCN3001
⚠	R666	RESISTOR (0.22Ω/5W)	XCN3001
⚠	R711	METAL OXIDE RESISTOR	RS2LMF392J
⚠	R751	CARBON FILM RESISTOR	RD1/4PUF101J
⚠	R752	CARBON FILM RESISTOR	RD1/4PUF101J
⚠	R753	METAL OXIDE RESISTOR	RS1LMF4R7J
⚠	R754	METAL OXIDE RESISTOR	RS1LMF4R7J
⚠	R755	CARBON FILM RESISTOR	RD1/4PUF101J
⚠	R756	METAL OXIDE RESISTOR	RS1LMF4R7J
⚠	R761	CARBON FILM RESISTOR	RD1/4PUF101J
⚠	R762	CARBON FILM RESISTOR	RD1/4PUF101J
⚠	R763	METAL OXIDE RESISTOR	RS1LMF4R7J
⚠	R764	METAL OXIDE RESISTOR	RS1LMF4R7J
	Other Resistors		RD1/4PU□□□J

OTHERS

	51	AC SOCKET 1-P	AKP1060
	701	7P CABLE HOLDER	51048-0700
	CN51	AC CODE SOCKET	RKP1751
	CN53	22P CONNECTOR	52045-2245
	CN601	16P PLUG	KM200TA16
	CN751	SPEAKER TERMINAL 6-P	XKE3007
	CN752	SPEAKER TERMINAL 4-P	XKE3006
	H51	FUSE CLIP	AKR7001
	H52	FUSE CLIP	AKR7001
	H53	FUSE CLIP	AKR7001
	H54	FUSE CLIP	AKR7001
	H701	FUSE CLIP	AKR7001
	H702	FUSE CLIP	AKR7001
⚠	T51	STANDBY TRANSFORMER	ATT7057
	KN51	EARTH METAL FITTING	VNF1084
	KN601	EARTH METAL FITTING	VNF1084

C TRANS2 ASSY

SEMICONDUCTORS

⚠	IC851	PROTECTOR (1.6A)	AEK7012
⚠	IC852	PROTECTOR (1.6A)	AEK7012
⚠	IC853	PROTECTOR (1.6A)	AEK7012

OTHERS

	851	7P CABLE HOLDER	51048-0700

D TRANS3 ASSY

TRANS3 ASSY has no service part.

E REGULATOR ASSY

SEMICONDUCTORS

	IC801	REGULATOR IC	NJM78M12FA
	IC802	REGULATOR IC	NJM79M12FA
	IC803	REGULATOR IC	NJM78M05FA
	IC804	REGULATOR IC	NJM78M05FA
	Q801	TRANSISTOR	KRA103M
	Q802	TRANSISTOR	KRC101M
	Q803	TRANSISTOR	KRA103M
	Q804	TRANSISTOR	KRC101M
⚠	D801	DIODE	S5688G
⚠	D802	DIODE	S5688G
⚠	D803	DIODE	S5688G
⚠	D804	DIODE	S5688G
⚠	D805	DIODE	S5688G
⚠	D806	DIODE	S5688G
⚠	D807	DIODE	S5688G
⚠	D808	DIODE	S5688G

CAPACITORS

	C801	ELECT. CAPACITOR	CEAT222M25
	C802	ELECT. CAPACITOR	CEAT222M25

Mark	No.	Description	Part No.
	C803	CERAMIC CAPACITOR	CGCYX103M25
	C804	CERAMIC CAPACITOR	CGCYX103M25
	C805	ELECT. CAPACITOR	CEAT101M16
	C806	ELECT. CAPACITOR	CEAT101M16
	C807	CERAMIC CAPACITOR	CGCYX103M25
	C808	ELECT. CAPACITOR	CEAT101M10
	C809	ELECT. CAPACITOR	CEAT222M16
	C810	CERAMIC CAPACITOR	CGCYX103M25
	C811	ELECT. CAPACITOR	CEAT101M10

OTHERS

	CN801	22P CONNECTOR	52045-2245
	CN802	19P PLUG	KM200TA19
	CN803	5P PLUG	KM200TA5

F AMP INPUT ASSY

OTHERS

	CN290	17P CONNECTOR	52044-1745
	CN291	16P SOCKET	KP200TA16L

G TRANS1 ASSY

TRANS1 ASSY has no service part.

H VIDEO&6CH IN ASSY

SEMICONDUCTORS

	IC301	VIDEO SW IC	NJM2296M
	IC302	IC	NJM4558MD
	IC303	IC	NJM4558MD
	Q301	TRANSISTOR	2SC3377
	Q302	TRANSISTOR	2SA1515
	Q303	TRANSISTOR	2SC2878
	D301	DIODE	1SS355
	D302	DIODE	1SS355
	D303	CHIP ZENER DIODE	UDZS6.2B
	D304	CHIP ZENER DIODE	UDZS6.2B
	D305	DIODE	1SS355
	D306	DIODE	1SS355

CAPACITORS

	C302	CERAMIC CAPACITOR	CKSRYB103K50
	C304	CERAMIC CAPACITOR	CKSRYB221K50
	C305	CERAMIC CAPACITOR	CKSRYB221K50
	C306	CERAMIC CAPACITOR	CKSRYB221K50
	C307	ELECT. CAPACITOR	CEAT470M25
	C308	ELECT. CAPACITOR	CEAT470M25
	C309	ELECT. CAPACITOR	CEAT470M25
	C310	ELECT. CAPACITOR	CEAT470M25
	C311	CERAMIC CAPACITOR	CKSRYB473K50
	C312	ELECT. CAPACITOR	CEAT470M25
	C313	CERAMIC CAPACITOR	CKSRYB473K50
	C314	ELECT. CAPACITOR	CEAT470M25
	C315	CERAMIC CAPACITOR	CKSRYB103K50
	C316	CERAMIC CAPACITOR	CKSRYB103K50
	C317	CERAMIC CAPACITOR	CKSRYB221K50
	C318	CERAMIC CAPACITOR	CKSRYB221K50
	C319	CHIP CAPACITOR	CCSRCH101J50
	C320	CHIP CAPACITOR	CCSRCH101J50
	C321	ELECT. CAPACITOR	CEAT4R7M50
	C322	CERAMIC CAPACITOR	CKSRYB103K50
	C323	CERAMIC CAPACITOR	CKSRYB103K50
	C324	ELECT. CAPACITOR	CEAT4R7M50
	C325	CERAMIC CAPACITOR	CKSRYB221K50
	C326	CERAMIC CAPACITOR	CKSRYB221K50
	C327	CHIP CAPACITOR	CCSRCH101J50
	C328	CHIP CAPACITOR	CCSRCH101J50
	C329	CERAMIC CAPACITOR	CKSRYB103K50
	C330	CERAMIC CAPACITOR	CKSRYB103K50
	C331	ELECT. CAPACITOR	CEAT4R7M50
	C332	ELECT. CAPACITOR	CEAT4R7M50
	C333	CERAMIC CAPACITOR	CKSRYB331K50
	C338	ELECT. CAPACITOR	CEAT470M25
	C339	CERAMIC CAPACITOR	CKSRYB104K25
	C340	CERAMIC CAPACITOR	CKSRYB104K25
	C342	CHIP CAPACITOR	CCSRCH101J50
	C343	CHIP CAPACITOR	CCSRCH101J50
	C344	CHIP CAPACITOR	CCSRCH101J50
	C345	CHIP CAPACITOR	CCSRCH101J50
	C346	CERAMIC CAPACITOR	CKSRYB104K16
	C347	CHIP CAPACITOR	CCSRCH470J50

RESISTORS

⚠	R 313	METAL OXIDE RESISTOR	RS3LMF560J
⚠	R 316	METAL OXIDE RESISTOR	RS3LMF560J
	Other Resistors		RS1/16S□□□J

OTHERS

	CN302	5P SOCKET	KP200TA5L
	CN303	14P CONNECTOR	52044-1445
	CN305	PIN JACK(6P)	XKB3009
	CN307	PIN JACK(4P)	XKB3013
	JA301	JACK	RKN1004

I H.P. ASSY

SEMICONDUCTORS

	Q1551	TRANSISTOR	2SC3326
	Q1552	TRANSISTOR	2SC3326

CAPACITORS

	C1551	CERAMIC CAPACITOR	CKSRYB104K16
	C1552	CERAMIC CAPACITOR	CKSRYB103K50
	C553	CHIP CERAMIC C.	CCSRCH471J50
	C555	CHIP CAPACITOR	CKSRYB223K50
	C556	CHIP CAPACITOR	CKSRYB223K50

RESISTORS

⚠	R1551	METAL OXIDE RESISTOR	RS1/2LMF121J
⚠	R1552	METAL OXIDE RESISTOR	RS1/2LMF121J
	R1553	CHIP RESISTOR	RS1/16S472J
	R1554	CHIP RESISTOR	RS1/16S472J

OTHERS

	1551	CABLE HOLDER(4P)	51063-0405
	JA1551	JACK	RKN1002
	KN1551	EARTH METAL FITTING	VNF1084

J DIGITAL IN ASSY

SEMICONDUCTORS

	IC1901	LOGIC IC	TC74ACT151F
	IC1902	LOGIC IC	TC74HCU04AF

Mark	No.	Description	Part No.
COILS AND FILTERS			
	F1901	CHIP BEAD	DTF1067
	F1902	CHIP BEAD	DTF1067
	F1903	CHIP BEAD	DTF1067
	F1904	CHIP BEAD	DTF1067
CAPACITORS			
	C1902	CERAMIC CAPACITOR	CKSRYB104K25
	C1904	ELECT. CAPACITOR	CEAT101M10
	C1905	ELECT. CAPACITOR	CEAT101M10
	C1906	CERAMIC CAPACITOR	CKSRYB103K50
	C1907	CHIP CERAMIC C.	CCSRCH271J50
	C1908	CERAMIC CAPACITOR	CKSRYB104K25
	C1909	CERAMIC CAPACITOR	CKSRYB104K25
	C1910	CERAMIC CAPACITOR	CKSRYB103K50
	C1911	CERAMIC CAPACITOR	CCSRCH560J50
	C1912	ELECT. CAPACITOR	CEAT101M10
	C1913	CERAMIC CAPACITOR	CKSRYB103K50
	C1914	CHIP CERAMIC C.	CCSRCH271J50
	C1915	CHIP CAPACITOR	CKSRYB102K50
	C1916	CHIP CERAMIC C.	CCSRCH471J50
	C1917	CHIP CERAMIC C.	CCSRCH220J50
	C1918	CHIP CERAMIC C.	CCSRCH221J50
	C1919	CERAMIC CAPACITOR	CKSRYB103K50
	C1920	CERAMIC CAPACITOR	CKSRYB103K50
	C1921	CERAMIC CAPACITOR	CKSRYB104K25
	C1922	CERAMIC CAPACITOR	CKSRYB104K25
RESISTORS			
	All Resistors		RS1/16S□□□J
OTHERS			
	CN1901	CONNECTOR 6P	52045-0645
	JA1901	JACK (1P)	AKB7111
	JA1902	OPTICAL RECEIV MOD.	GP1F32R

K FRONT ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC401	CONTROL MCU	PDG260A
	Q 401	CHIP DIGITAL TRANS.	DTA124EK
	Q 402	CHIP DIGITAL TRANS.	DTA124EK
	Q 403	DIGITAL TRANSISTOR	DTC143EK
	Q 404	DIGITAL TRANSISTOR	DTC143EK
	Q 405	CHIP TANSISTOR	2SA1037K
	Q 441	DIGITAL TRANSISTOR	DTC143EK
	Q 442	CHIP DIGITAL TRANS.	DTA124EK
	Q 471	CHIP DIGITAL TRANS.	DTA124EK
	D 401	CHIP DIODE ARRAY	DAP202K
	D 403	DIODE	DAN217
	D 404	CHIP DIODE ARRAY	DAP202K
	D 405	DIODE	DAN217
	D 407	DIODE	1SS355
	D 408	DIODE	1SS355
	D 442	DIODE	1SS355
COILS AND FILTERS			
	L401	RADIAL INDUCTOR	LFEA2R2J
SWITCHES AND RELAYS			
	S 451	SWITCH	ASG1051
	S 452	SWITCH	ASG1051
	S 453	SWITCH	ASG1051
	S 454	SWITCH	ASG1051
	S 455	SWITCH	ASG1051
	S 456	SWITCH	ASG1051
	S 457	SWITCH	ASG1051
	S 458	SWITCH	ASG1051
	S 459	SWITCH	ASG1051
	S 460	SWITCH	ASG1051
	S 461	SWITCH	ASG1051
	S 462	SWITCH	ASG1051
	S 463	SWITCH	ASG1051
	S 464	SWITCH	ASG1051
	S 465	SWITCH	ASG1051
	S 476	SWITCH	ASG1051
CAPACITORS			
	C401	CERAMIC CAPACITOR	CKSRYB103K50
	C402	ELECT. CAPACITOR	CEAT221M6R3
	C403	CERAMIC CAPACITOR	CKSRYB103K50
	C404	EDL CAPACITOR (0.047F/5.5V)	ACH7017
	C405	ELECT. CAPACITOR	CEAT221M6R3
	C406	CERAMIC CAPACITOR	CKSRYB473K16
	C407	CERAMIC CAPACITOR	CKSRYB473K16
	C408	CERAMIC CAPACITOR	CKSRYB104K16
	C409	ELECT. CAPACITOR	CEAT2R2M50
	C410	ELECT. CAPACITOR	CEAT2R2M50
	C411	CERAMIC CAPACITOR	CKSRYB103K50
	C412	ELECT. CAPACITOR	CEAT470M50
	C416	CERAMIC CAPACITOR	CKSRYB104K16
	C418	CERAMIC CAPACITOR	CKSRYB104K16
	C419	CERAMIC CAPACITOR	CKSRYB103K50
	C420	ELECTROLYTIC CAPACIT (220µF/35V)	ACH7101
	C441	CERAMIC CAPACITOR	CKSRYB103K50
	C442	ELECT. CAPACITOR	CEJA470M10
	C451	CHIP CAPACITOR	CKSRYB102K50
	C452	CHIP CAPACITOR	CKSRYB102K50
	C453	CHIP CAPACITOR	CKSRYB102K50
	C471	CERAMIC CAPACITOR	CKSRYB104K16
	C491	CERAMIC CAPACITOR	CKSRYB104K16
	C492	CERAMIC CAPACITOR	CKSRYB104K16
	C493	CERAMIC CAPACITOR	CKSRYB104K16
	C494	CERAMIC CAPACITOR	CKSRYB104K16
	C495	CHIP CAPACITOR	CKSRYB102K50
	C531	CERAMIC CAPACITOR	CKSRYB103K50
	C532	CERAMIC CAPACITOR	CKSRYB223K25
RESISTORS			
	All Resistors		RS1/16S□□□J
OTHERS			
	401	REMOTE RECEIVER UNIT	GP1U28X
	403	CABLE HOLDER(4P)	51063-0405
	404	CABLE HOLDER(6P)	51063-0605
	471	CABLE HOLDER(4P)	51063-0405
	CN401	19P CONNECTOR	52044-1945
	CN402	33P CONNECTOR	52044-3345
	V401	FL TUBE	XAV3010
	X401	CERAMIC RESONATOR (7.2MHz)	ASS7018

Mark	No.	Description	Part No.
L		**R.ENCODER ASSY**	
		SWITCHES AND RELAYS	
	S 511	SWITCH	ASG1051
	S 512	ROTARY ENCODER	XSX3006
	S 513	ROTARY ENCODER	XSX3005
		OTHERS	
	511	CABLE HOLDER(6P)	51063-0605
M		**POWER SW ASSY**	
		SEMICONDUCTORS	
	D501		BR3371XJ30A
		SWITCHES AND RELAYS	
	S 501	SWITCH	ASG1051
		RESISTORS	
	R 501	CHIP RESISTOR	RS1/16S271J
		OTHERS	
	501	CABLE HOLDER(4P)	51063-0405

6. ADJUSTMENT

There is no information to be shown in this chapter.

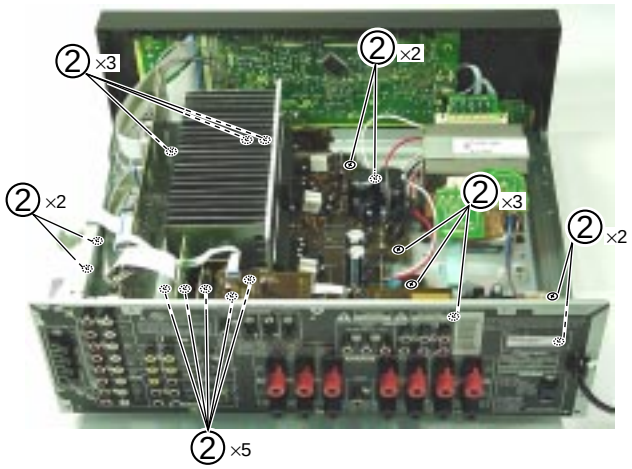
7. GENERAL INFORMATION

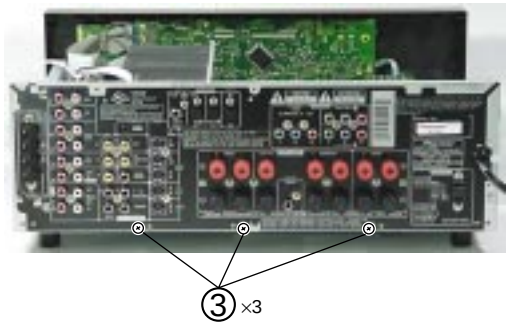
7.1 DISASSEMBLY and DIAGNOSIS

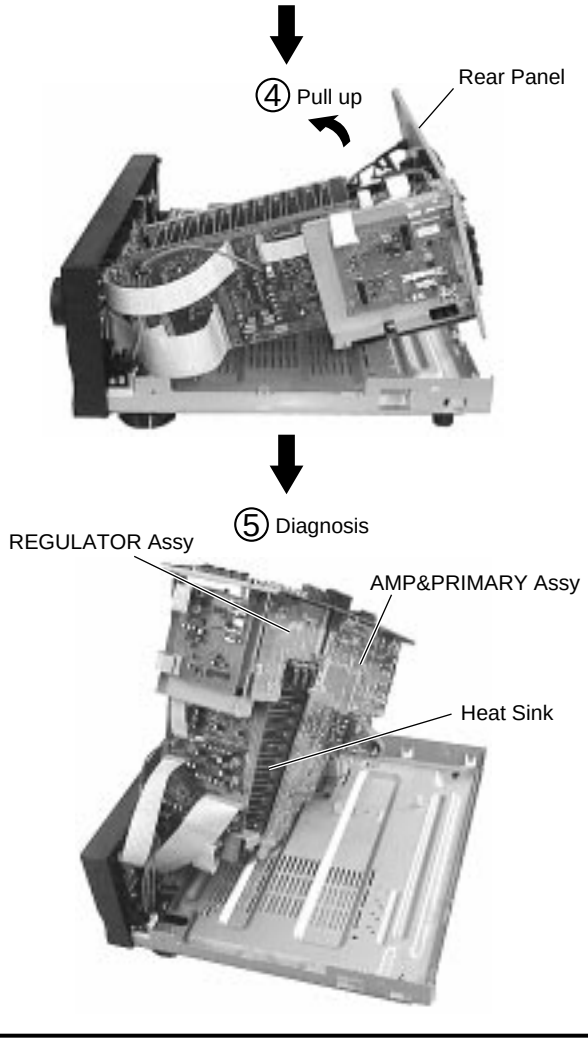
■ Diagnosis

Note : This photograph shows other models.
However, the work method is the same.

① Remove the Bonnet (seven screws).

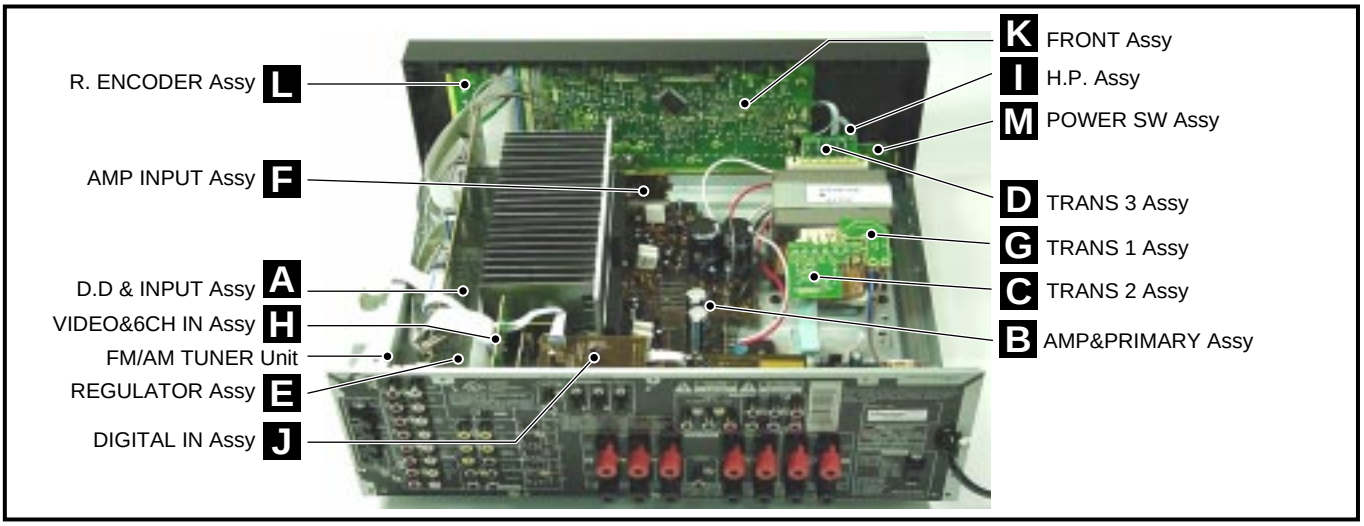






Note : If a speaker and the screw of a rear panel are removed, a set will stop moving.
Even if it removes TUNER Unit, it is uninfluential in operation of those other than TUNER Unit.

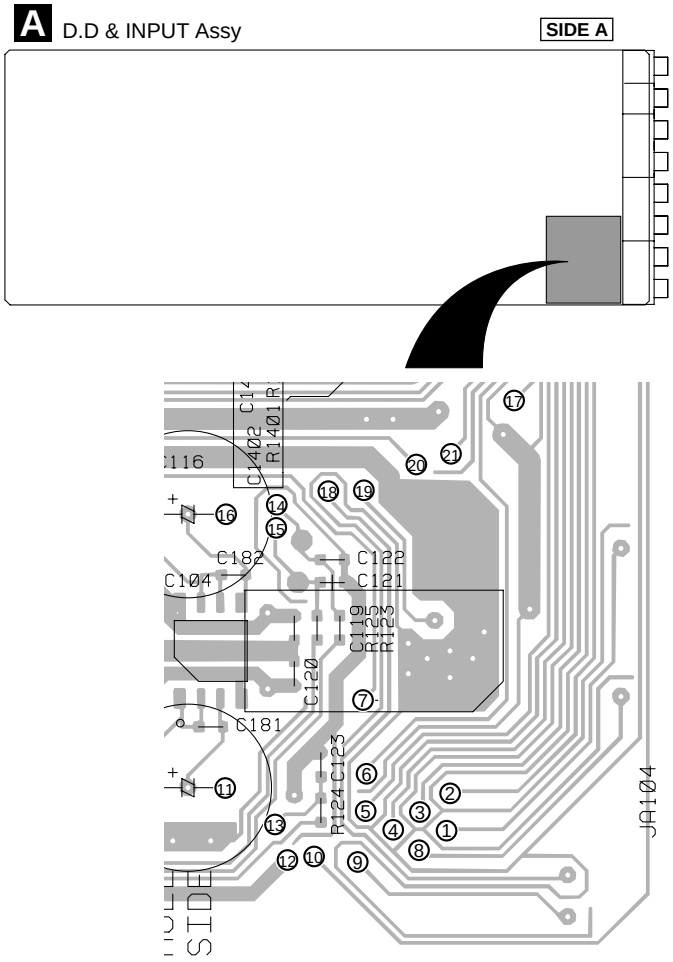
■ PCB Location



■ Diagnosis of D.D & INPUT Assy

① Remove FM/AM TUNER Unit and Shield R3 (five screws).
Please check SIDE A of the D.D & INPUT Assy on this status.

Please check IC101 mounted on side B from SIDE A.
The Pin number points on SIDE A of IC 101 are shown as follows.



7.2 PARTS

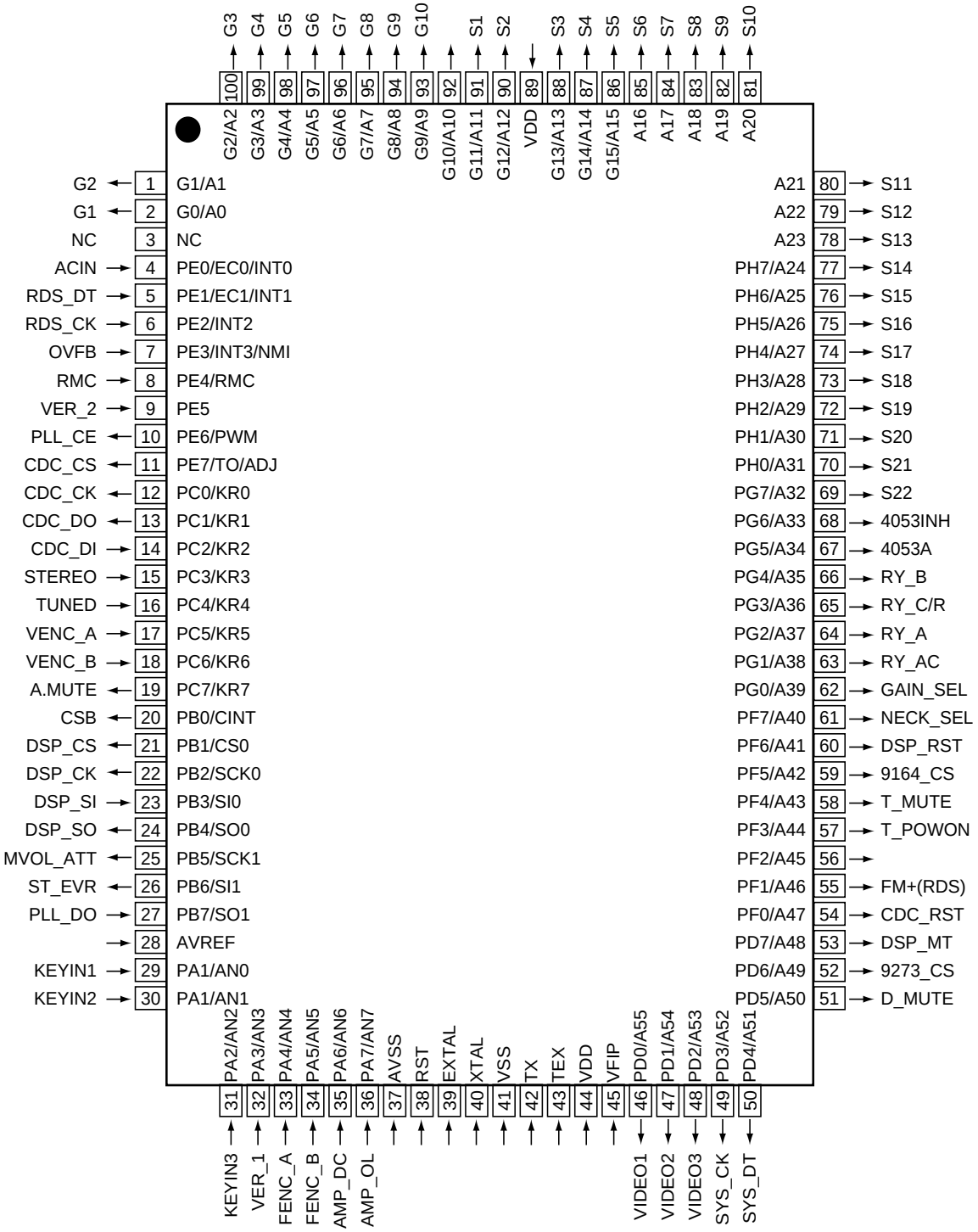
7.2.1 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

■ PDG260A (FRONT ASSY : IC401)

• System Control MCU

● Pin Arrangement (Top View)



● **Pin Function**

No.	Pin Name	I/O	Pin Function	Active
1	G2	O	Grid output 2	H
2	G1	O	Grid output 1	H
3	NC	–	Connect to VDD	
4	ACIN	I	AC pulse input	
5	RDS_DT	I	Serial control DATA signal of RDS communication	
6	RDS_CK	I	Serial control CLOCK signal of RDS communication	
7	DIRLOCK	I	ERR/OVER input from CODEC	
8	RMC	I	Remote control signal input (no-carrier signal)	
9	VER_2	I	Destination switch 2	
10	PLL_CE	O	Chip select signal for communication with LC72131 (tuner)	H
11	CDC_CS	O	CODEC chip serect	
12	CDC_CK	O	CODEC, TC9164 control clock	
13	CDC_DO	O	CODEC, TC9164 control data output	
14	CDC_DI	I	Data input from CODEC	
15	STEREO	I	Stereo/Monoral signal judgment signal	
16	TUNED	I	TUNED information	
17	ENC_A	I	EVOL Rotary encoder signal input A	
18	ENC_B	I	EVOL Rotary encoder signal input B	
19	AMUTE	O	Audio mute	L
20	CSB	O	Chip select for control of YSS912 sub DSP	L
21	DSP_CS	O	Chip select for control of YSS912 main DSP	L
22	DSP_CK	O	Clock signal for communication with YSS912	H
23	DSP_SI	I	DATA input signal for communication with YSS912	
24	DSP_SO	O	DATA output signal for communication with YSS912	H
25	MVRATT	O	ATT control of master volume (L : Less than -15dB)	H
26	ST_EVR	O	Strobe signal for communication with electric volume IC	H
27	PLL_DO	I	Data input signal for communication with LC72131 (tuner)	
28	AVref	–	Connect to VDD	
29	KEYIN1	I	Key input A/D conversion port 1	
30	KEYIN2	I	Key input A/D conversion port 2	
31	KEYIN3	I	Key input A/D conversion port 3	
32	VER_1	I	Destination switch (A/D input)	
33	FENC_A	I	FUNC Rotary encoder signal input A	
34	FENC_B	I	FUNC Rotary encoder signal input B	
35	AMP_DC	I	DC abnormality detection of protection circuit (L : Abnormality detection)*	L
36	AMP_OL	I	Over-load detection of protection circuit (L : Abnormality detection)*	L
37	AVSS	–	Connect to VSS	
38	RST	–	Reset	
39	EXTAL	–	Connect to the oscillator (7.2MHz)	
40	XTAL	–		
41	VSS	–	Connect to VSS	
42	TX	–	Open	
43	TEX	–	Connect to VSS	
44	VDD	–	+5V	
45	VFDP	–	-30V	
46	VIDEO1	O	NJM2296D control	H
47	VIDEO2			
48	VIDEO3			
49	SYS_DT	O	Data signal for communication with M62446, TC9163, TC9164 and PLL	H
50	SYS_CK	O	Clock signal for communication with M62446, TC9163, TC9164 and PLL	H

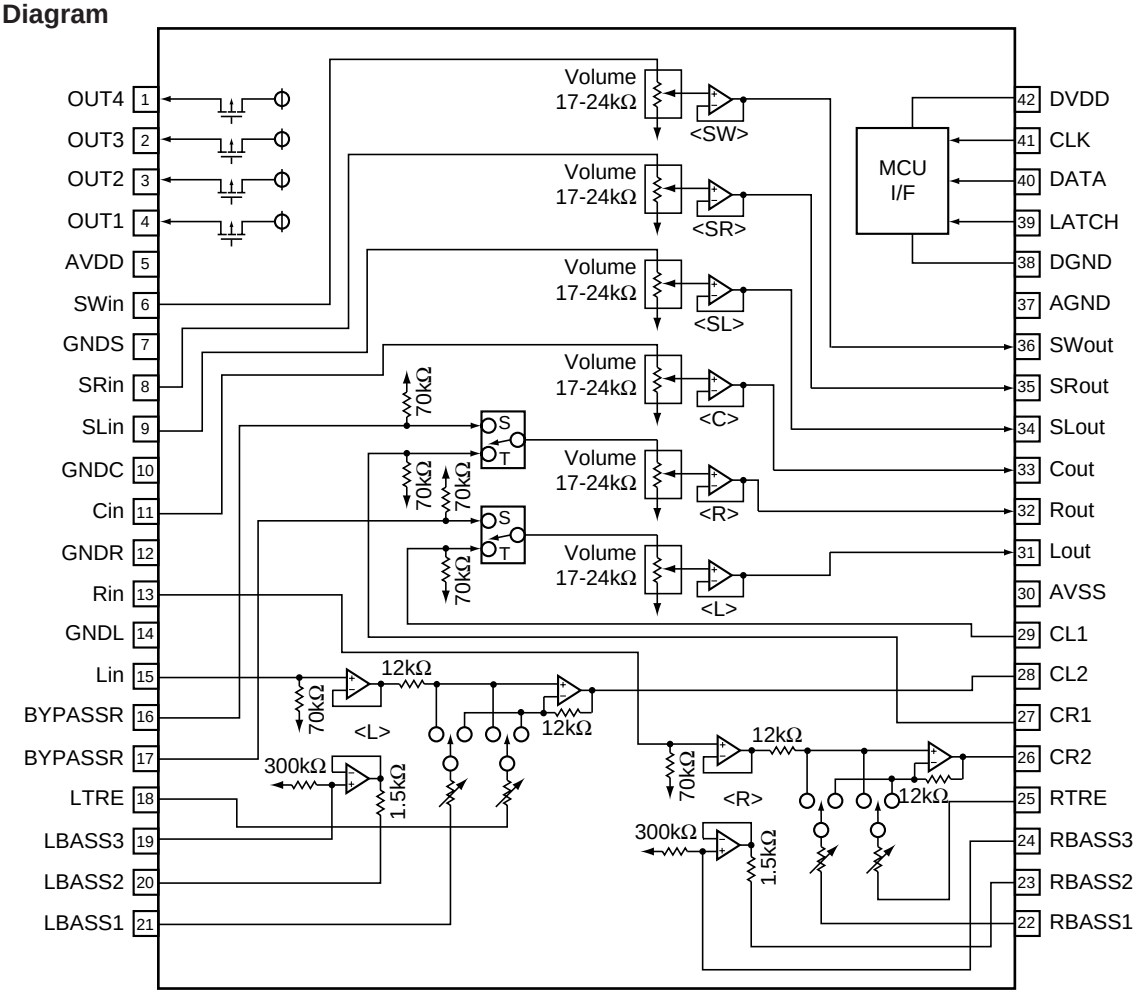
*: To FL "PowerOFF" When displayed, it is the case where DC is in the output of AMP.
To FL "OVER LOAD" When displayed, it is the case where the output of AMP is Over-load.

No.	Pin Name	I/O	Pin Function	Active
51	D_MUTE	O	Digital mute (Not used)	H
52	9273_CS	O	TC9273 Chip select	H
53	DSP_MT	O	DSP mute (ASSY mute)	H
54	CDC_RST	O	CODEC reset	H
55	FM+(RDS)	O	Tr switch ON/OFF for power supply of RDS decoder (L : AM, power OFF , H : Other)	H
56	Not used	–		
57	T_POWON	O	Tuner module ON/OFF (North America model only)	H
58	T_MUTE	O	Tuner mute	H
59	9164 CS	O	TC9163, TC9164 Chip select	
60	DSP_RST	O	YSS912 reset	
61	NECK_SEL	O	5.1ch, surround mode and A+B Stereo : H / Stereo : L	
62	GAIN_SEL	O	Gain select (5.1ch and Stereo of analog input : H)	H
63	RY_AC	O	AC relay ON/OFF	H
64	RY_A	O	Speaker A relay ON/OFF	H
65	RY_C/R	O	Rear/Center Speaker relay ON/OFF	H
66	RY_B	O	Speaker B relay ON/OFF	H
67	4053A	O	Component terminal control	H
68	4053INH	O	Component terminal control	H
69	S22	O	Segment output 22	H
70	S21		Segment output 21	
71	S20		Segment output 20	
72	S19		Segment output 19	
73	S18		Segment output 18	
74	S17		Segment output 17	
75	S16		Segment output 16	
76	S15		Segment output 15	
77	S14		Segment output 14	
78	S13		Segment output 13	
79	S12		Segment output 12	
80	S11		Segment output 11	
81	S10		Segment output 10	
82	S9		Segment output 9	
83	S8		Segment output 8	
84	S7		Segment output 7	
85	S6		Segment output 6	
86	S5		Segment output 5	
87	S4		Segment output 4	
88	S3		Segment output 3	
89	VDD	–	5V	
90	S2	O	Segment output 2	H
91	S1		Segment output 1	
92	Not used	O	Not used (Fixed Vfdp)	
93	G10	O	Grid output 10	H
94	G9		Grid output 9	
95	G8		Grid output 8	
96	G7		Grid output 7	
97	G6		Grid output 6	
98	G5		Grid output 5	
99	G4		Grid output 4	
100	G3		Grid output 3	

■ M62446FP (D.D & INPUT ASSY : IC103)

• Sound Controller IC (Volume and Tone Control)

● Block Diagram



● Pin Function

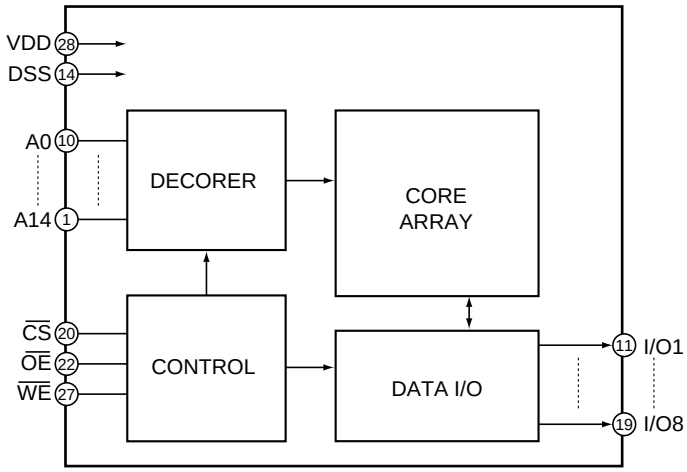
No.	Pin Name	Function
1	OUT4	Output port (open drain of PchTr)
2	OUT3	
3	OUT2	
4	OUT1	
5	AVDD	Analog positive power supply port
7	GNDS	GND (connect to analog ground)
10	GNDC	
12	GNDR	
14	GNDL	
6	SWin	Volume input
8	SRin	
9	SLin	
11	Cin	
36	SWout	Volume output
35	SRout	
34	SLout	
33	Cout	
13	Rin	TONE input
15	Lin	
16	BYPASSR	L and R Volume input at bypass
17	BYPASSL	
31	Lout	L output
32	Rout	R output

No.	Pin Name	Function
18	LTRE	TONE TREBLE frequency control port
25	RTRE	
19	LBASS3	TONE BASS frequency control port
24	RBASS3	
20	LBASS2	
23	RBASS2	
21	LBASS1	
22	RBASS1	
26	CR2	TONE output port
28	CL2	
27	CR1	L and R volume input
29	CL1	
31	Lout	L output
32	Rout	R output
30	AVSS	Analog negative power supply port
37	AGND	Analog ground port
38	DGND	Digital ground port
39	LATCH	Latch input port
40	DATA	Data input port
41	CLK	Clock input port for data transmission
42	DVDD	Digital power supply port

W24257AJ-12 (D.D & INPUT ASSY : IC1301)

- **32K × 8 High-Speed CMOS Static RAM**

● Block Diagram



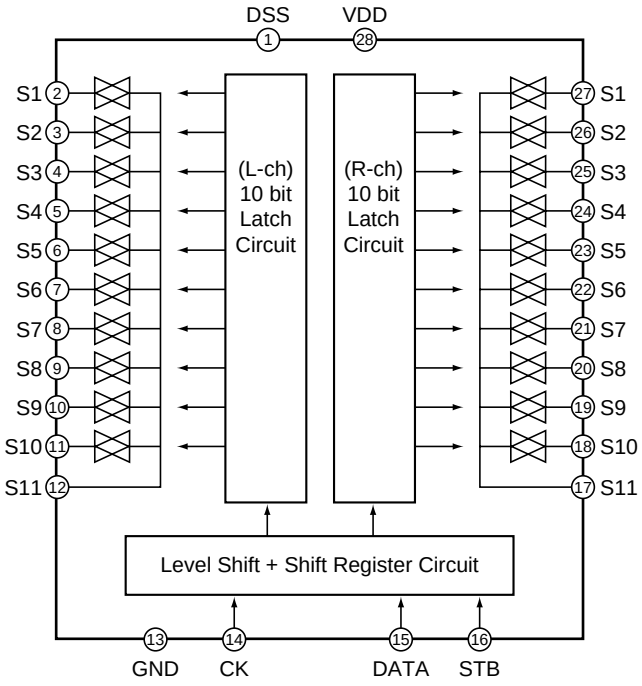
● Pin Function

No.	Pin Name	Function
1	A14	Addres Inputs
2	A12	
3	A7	
4	A6	
5	A5	
6	A4	
7	A3	
8	A2	
9	A1	
10	A0	
21	A10	
23	A11	
24	A9	
25	A8	
26	A13	
11	I/O1	Data Inputs/Outputs
12	I/O2	
13	I/O3	
15	I/O4	
16	I/O5	
17	I/O6	
18	I/O7	
19	I/O8	
14	Vss	Ground
20	CS	Chip Select Input
22	OE	Output Enable Input
27	WE	Write Enable Input
28	Vdd	Power Supply

TC9273F-007 (D.D & INPUT ASSY : IC101)

- **Analog Switch Array**

● Block Diagram



● Pin Function

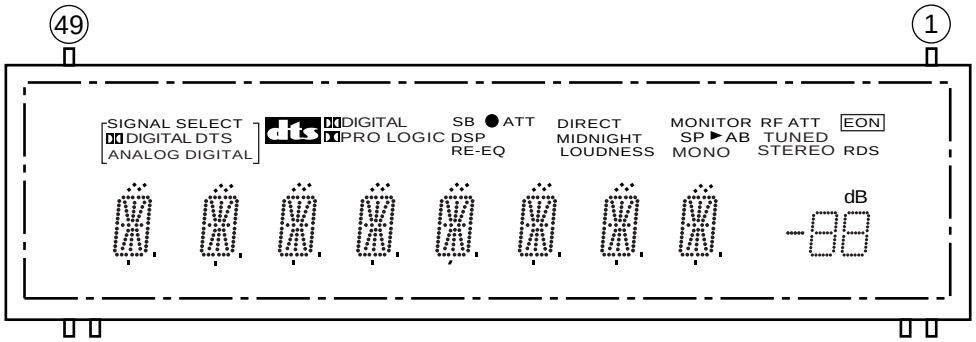
No.	Pin Name	Function
1	VSS	Minus Power Supply
2, 27	S1	Input and Output
3, 26	S2	
4, 25	S3	
5, 24	S4	
6, 23	S5	
7, 22	S6	
8, 21	S7	
9, 20	S8	
10, 19	S9	
21, 18	S10	
26, 17	S11	
13	GND	Digital Ground
14	CK	Clock Input
15	DATA	Data Input
16	STB	Strobe Input
28	VDD	Plus Power Supply

7.2.2 DISPLAY

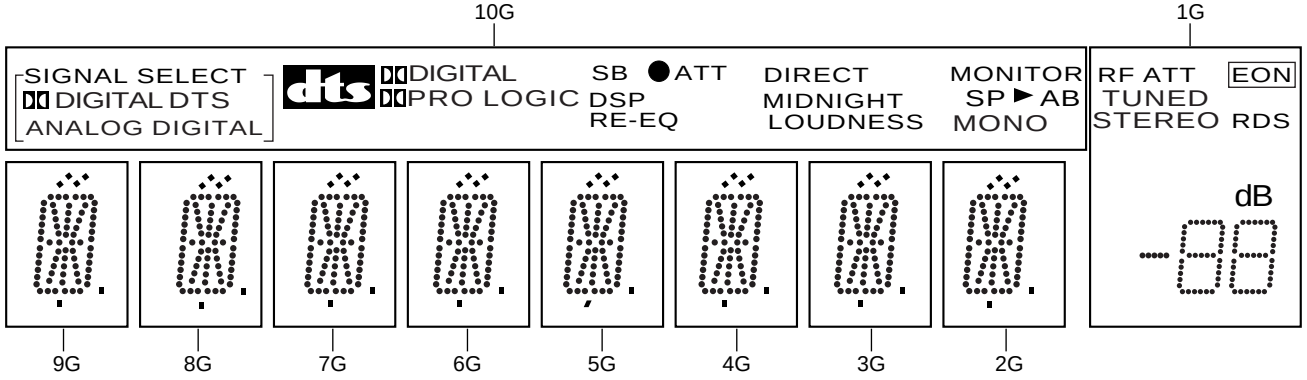
■ XAV3010 (FRONT ASSY : V401)

• FL DISPLAY

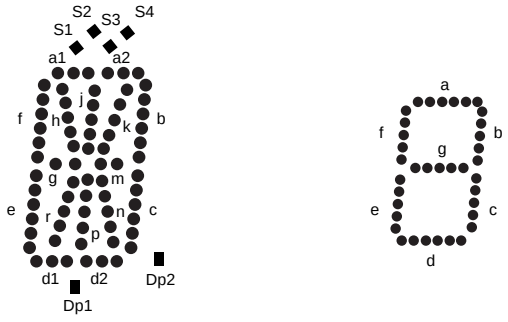
• Pin Assignment



• Grid Assignment



• Segment Designation



(9G to 2G) (1G)

• Pin Connection

Pin No.	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25
Connection	F2	F2	NP	NP	P22	P21	P20	P19	P18	P17	P16	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2
Pin No.	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
Connection	P1	NX	NX	NX	NX	NX	NX	NX	NX	NX	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NP	NP	F1	F1	

NOTE 1) F1, F2..... Filament
2) NP..... No pin
3) NX..... No extend pin
4) DL..... Datum Line
5) 1G to 10G..... Grid
6) Field of vision is a minimum of 29° from the lower side.

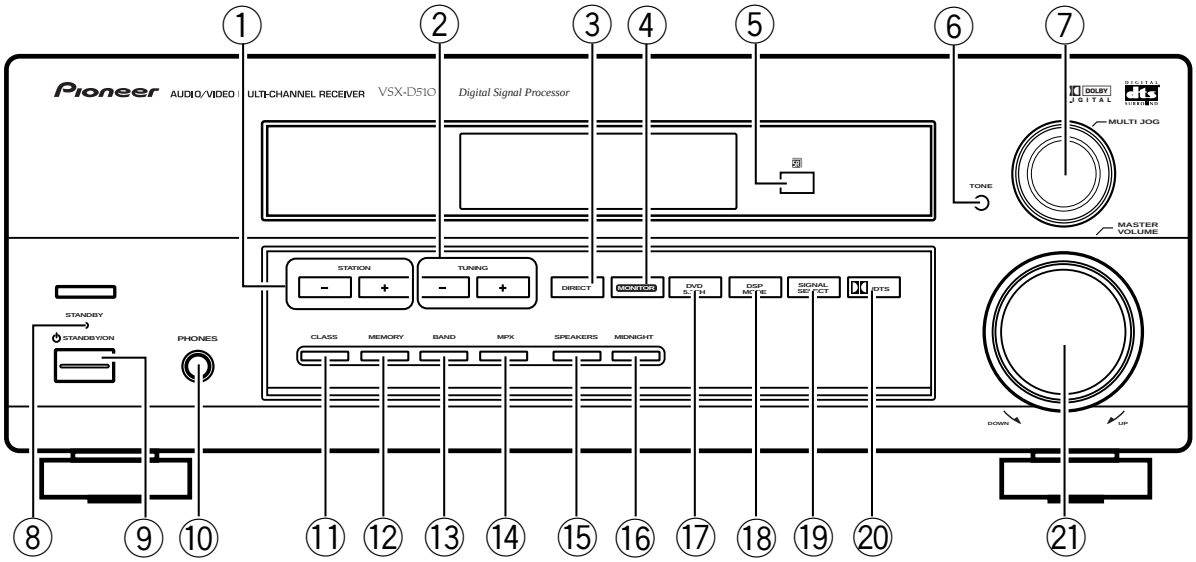
• Anode Connection

	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	MONO	a1	a1	a1	a1	a1	a1	a1	a1	dB
P2	B	a2	a2	a2	a2	a2	a2	a2	a2	2a
P3	A	h	h	h	h	h	h	h	h	2b
P4	SP ►	j	j	j	j	j	j	j	j	2f
P5	MONITOR	k	k	k	k	k	k	k	k	2g
P6	LOUDNESS	b	b	b	b	b	b	b	b	2c
P7	MIDNIGHT	f	f	f	f	f	f	f	f	2e
P8	DIRECT	m	m	m	m	m	m	m	m	2d
P9	DNR	g	g	g	g	g	g	g	g	1a
P10	ATT	c	c	c	c	c	c	c	c	1b
P11	●	e	e	e	e	e	e	e	e	1f
P12	DSP	r	r	r	r	r	r	r	r	1g
P13	SB	p	p	p	p	p	p	p	p	1c
P14	PRO LOGIC	n	n	n	n	n	n	n	n	1e
P15	DIGITAL	d1	d1	d1	d1	d1	d1	d1	d1	1d
P16	dts	d2	d2	d2	d2	d2	d2	d2	d2	•••••
P17	ANALOG	Dp2	Dp2	Dp2	Dp2	Dp2	Dp2	Dp2	Dp2	RDS
P18	DIGITAL	Dp1	Dp1	Dp1	Dp1	Dp1	Dp1	Dp1	Dp1	RF ATT
P19	[ ]	S1	S1	S1	S1	S1	S1	S1	S1	EON
P20	DTS	S4	S4	S4	S4	S4	S4	S4	S4	▭
P21	DIGITAL	S2	S2	S2	S2	S2	S2	S2	S2	TUNED
P22	SIGNAL SELECT	S3	S3	S3	S3	S3	S3	S3	S3	STEREO

8. PANEL FACILITIES AND SPECIFICATIONS

8.1 PANEL FACILITIES

Front Panel



① **STATION (+/–) buttons**
Selects station memories when using the tuner.

② **TUNING buttons**
Selects the frequency when using the tuner.

③ **DIRECT button**
Use to switch DIRECT playback on or off. This mode bypasses the tone controls and channel levels for the most accurate reproduction of a source.

④ **MONITOR button**
Press to switch tape monitoring on/off.

⑤ **Remote sensor**
Receives the signals from the remote control.

⑥ **TONE button**
Press this button to access the bass and treble controls, which you can then adjust with the **MULTI JOG dial**.

⑦ **MULTI JOG DIAL**
The Multi Jog dial performs a number of tasks. Use it to select the function (like DVD or CD) that you want to play. You can also use it, after pressing the **TONE** button to increase or decrease the amount of bass or treble.

⑧ **STANDBY indicator**
Lights when the receiver is in standby mode (note that the receiver consumes a small amount of power (1W) in standby mode).

⑨ ⏻ **STANDBY/ON button**
Switches the receiver between on and standby.(note that the receiver consumes a small amount of power (1W) in standby mode).

⑩ **PHONES jack**
Use to connect headphones. (Use the **SPEAKER** button to turn off the speakers if you want to mute the sound from the speakers.)

⑪ **CLASS button**
Switches between the three banks (classes) of station memories.

⑫ **MEMORY button**
Press to memorize a station for recall using the **STATION (+/–)** buttons.

⑬ **BAND button**
Switches between station AM and FM radio bands.

⑭ **MPX button**
If the **TUNED** or **STEREO** indicators don't light when tuning to an FM station because the signal is weak, press the **MPX** button to switch the receiver into mono reception mode. This should improve the sound quality and allow you to enjoy the broadcast.

⑮ **SPEAKER button**
Use to switch the speaker system between **A** (on) and **off**.

⑯ **MIDNIGHT button**
Use when listening to movie soundtracks at low volume. This feature will enable you to hear quiet sounds and not get jolted by loud or sudden sound effects.

⑰ **DVD 5.1ch button**
Use this button to switch between a DVD player hooked up to the digital inputs and a 5.1 ch external decoder hooked up to the 5.1 ch analog inputs.

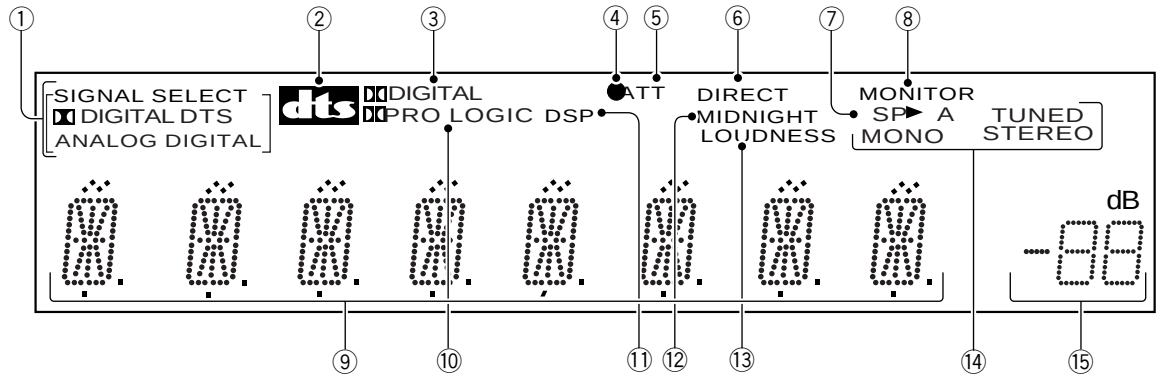
⑱ **DSP MODE button**
Use to switch between the various DSP modes available (**HALL1, HALL 2, JAZZ, DANCE, THEATER1, THEATER 2**) and **DSP off**. Use to create different surround sound effects from any stereo source.

⑲ **SIGNAL SELECT button**
Use to select between an analog or digital signal.

⑳ **/DTS button**
Use to switch between the various Dolby/DTS surround modes.

㉑ **MASTER VOLUME**
Use to set the overall listening volume.

Display



① **SIGNAL SELECT indicators**
Lights to indicate the type of input signal assigned for the current component :
DIGITAL : Lights when a DOLBY DIGITAL signal is played.
DTS : Lights when a source with DTS audio signals is played.
ANALOG : Lights when an analog signal is selected.
DIGITAL : Lights when a digital audio signal is selected.

② **DTS indicator**
Lights when DTS mode is being used.

③ **DIGITAL indicator**
When the (DOLBY)/DTS mode of the receiver is on, this lights to indicate playback of a Dolby Digital signal. However, PRO LOGIC lights during two channel playback of Dolby Digital.

④ **OVERLOAD indicator**
This lights when an analog signal is too high (the SIGNAL SELECT would have to be on ANALOG). It indicates the sound is distorting and the input signal should be reduced.

⑤ **ATT indicator**
Lights when ATT is used to attenuate (reduce) the level of the input signal (can only be used in ANALOG mode).

⑥ **DIRECT indicator**
Lights when source DIRECT is in use. This function bypasses all tone, balance, DSP and Dolby Surround effects.

⑦ **SPEAKER indicator**
Shows if the speaker system is on or not. SP ►A means speakers are switched on. SP ► means speakers are switched off.

⑧ **MONITOR indicator**
Lights when **MONITOR** is selected. Used to hear a recording as it's being made.

⑨ **CHARACTER display**
Shows the radio frequency or function (DVD/LD, CD, etc.) receiver is using .

⑩ **PRO LOGIC indicator**
When the (DOLBY)/DTS mode of the receiver is on, this lights to indicate playback of a two channel source.

⑪ **DSP indicator**
Lights when any Advanced Theater or DSP mode is selected.

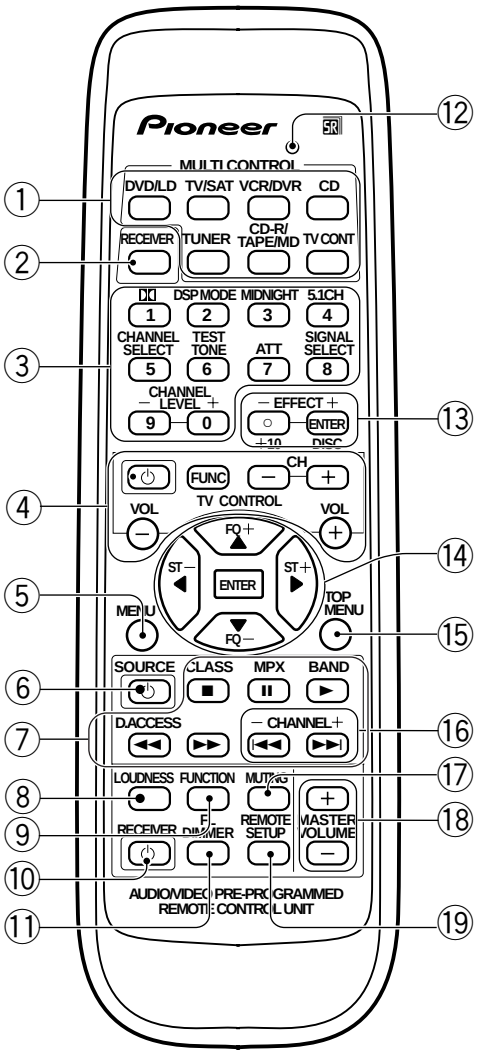
⑫ **MIDNIGHT indicator**
Lights when MIDNIGHT listening mode is in use.

⑬ **LOUDNESS indicator**
Lights when the LOUDNESS is on. Use to boost the bass and treble at low volume.

⑭ **TUNER indicators**
MONO:
Lights when the mono mode is set using the **MPX** button.
TUNED:
Lights when a broadcast is being received.
STEREO:
Lights when a stereo FM broadcast is being received in auto stereo mode.

⑮ **MASTER VOLUME LEVEL**
Shows the overall volume level. Volume level is maintained even when the power is off. **---dB** indicates the minimum level, and **0dB** indicates the maximum level.
- Depending on the level settings you make for individual channels, the MAX level can range between –10dB and 0dB.

Remote Control



① **MULTI CONTROL buttons**
Use to put the receiver/remote control in the stated mode. For other equipment controls, see Controlling the Rest of Your System.

② **RECEIVER button**
Use this button when setting up the surround sound for the receiver.

③ **NUMBER/MODE buttons**
Use the number buttons to select the radio frequency in tuner DIRECT ACCESS mode or the tracks in CD, DVD mode etc.

Also, buttons marked with the following names have special functions. If you try to use one of these functions but the display flashes it means that function cannot be used in the current mode (for example DSP modes cannot be used when 5.1 CH setting is on).

DSP mode
Use to put receiver in DOLBY DIGITAL, DOLBY SURROUND and DTS modes. To use first press the **RECEIVER** button then operate this button.

MIDNIGHT
Use to put receiver in MIDNIGHT mode. To use first press the **RECEIVER** button then operate this button.

5.1 ch
When the DVD/LD or DVD 5.1 CH function is selected each press switches the DVD/LD input between DVD/LD and DVD 5.1 CH. To use first press the **RECEIVER** button then operate this button.

CHANNEL SELECT
Use to select a speaker when setting up the surround sound of the receiver. To use first press the **RECEIVER** button then operate this button.

TEST TONE
Use to sound the TEST TONE when setting up the surround sound of the receiver. To use first press the **RECEIVER** button then operate this button.

ATT
If the Overload indicator lights often, use to attenuate (lower) the level of an analog input signal to prevent distortion. To use, press the **RECEIVER** button first, then press this button.

CHANNEL LEVEL +/–
Use to set up the levels of the surround sound of the receiver. To use first press the **RECEIVER** button then operate this button.

SIGNAL SELECT
Use to select the proper signal (analog, digital) for the source your are inputting. To use first press the **RECEIVER** button then operate this button.

④ **THE FOLLOWING FOUR SETS OF BUTTONS ARE DEDICATED TV CONTROL. THEY ARE ONLY USED FOR CONTROLLING YOUR TV.**

FUNC button
Use select the TV function.

TV POWER button
Use to turn on the power of the TV.

TV CHANNEL +/– buttons
Use to change channels on your TV.

TV VOLUME +/– buttons
Use to adjust the volume on your TV.

⑤ **MENU button**
Use to access different menus associated with your DVD player.

⑥ **SOURCE button**
Use to turn on/off the components connected to the receiver.

⑦ **THE FOLLOWING BUTTONS ARE BOTH CONTROLS FOR OTHER COMPONENTS (LIKE A DVD PLAYER) AND DEDICATED TUNER CONTROLS. THE TUNER CONTROLS ARE EXPLAINED HERE. YOU CAN USE THEM AFTER YOU HAVE PUSHED THE TUNER MULTI CONTROL BUTTON.**

CLASS button
Use to switch between the three banks (classes) of station memories.

MPX MODE button
Use to switch between auto stereo and mono reception of FM broadcasts. If the signal is weak then switching to MONO will improve the sound quality. Also, this is the pause button for CDs, tapes, DVDs, etc.

BAND button
Use to switch between the AM and FM band when in TUNER mode.

D. ACCESS button
Use to directly access a radio station by pressing the number of the station you want.

⑧ **LOUDNESS button**
Use to switch on the loudness. This feature is useful for getting good bass and treble sounds listening at low volumes.

⑨ **FUNCTION button**
Use to select the playback or recording source. This button lets you cycle through the different functions of the receiver in the following order: CD, tuner, CDR/TAPE, VCDR/DVR, DVD/LD, DVD 5.1 CH., and TV/SAT.

⑩ **RECEIVER ⏻ (POWER) button**
This switches between STANDBY mode and power ON for this receiver.

⑪ **FL DIMMER button**
Use this button to make the fluorescent display (FL) dimmer or brighter. There are three brightness settings as well as an off setting.

⑫ **LED DISPLAY**
This display flashes when a command is sent from the remote control to the receiver. It also flashes at other times, for example when teaching the receiver preset codes with specific meanings.

⑬ **EFFECT +/– buttons**
Use to add or subtract the amount of effect in different DSP sound modes or advanced listening modes.

⑭ **◄► (ST +/–) ▲▼ (FQ +/–) & ENTER buttons**
Use these arrow buttons when setting up your surround sound system. These buttons are also used to control DVD menus/options and for deck 1 of a double cassette deck player. The **FQ +/–** buttons can be used to find radio frequencies. The **ST +/–** buttons can be used to select the stations of memorized radio frequencies.

⑮ **TOP MENU button**
In DVD mode this button brings you to the top or most fundamental menu.

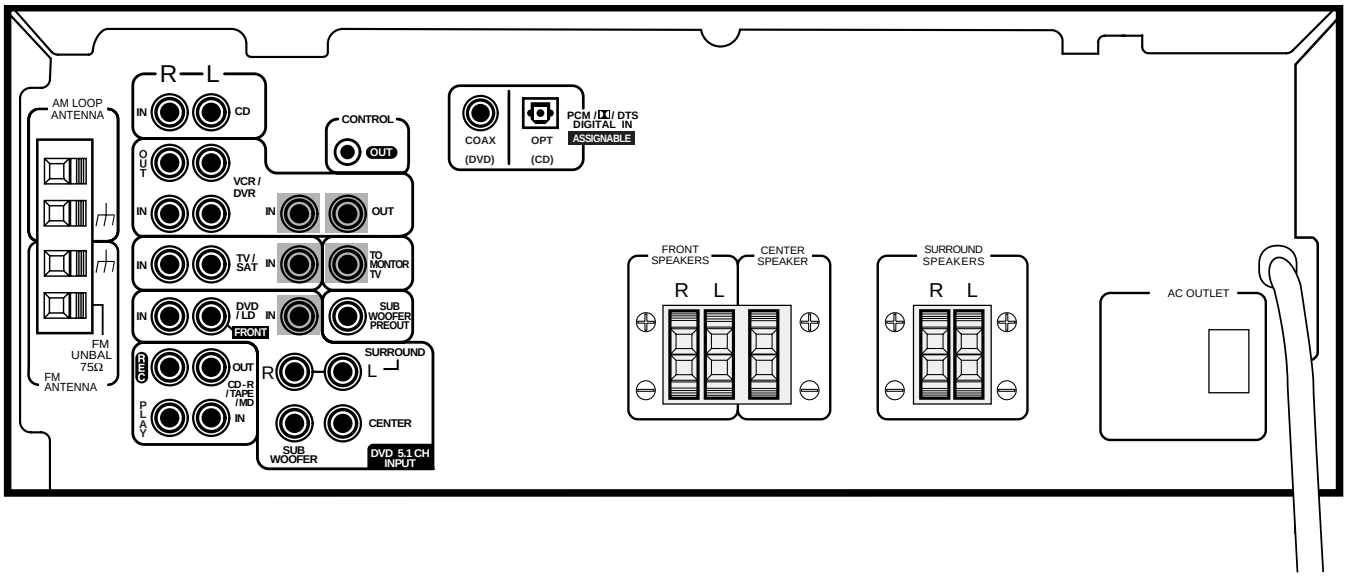
⑯ **CHANNEL +/– buttons**
Use to select the stations of memorized radio frequencies. Also use to skip tracks backward or forward on CDs, DVDs, etc.

⑰ **MUTING button**
Use to mute the sound or restore the sound if it has been muted.

⑱ **MASTER VOLUME +/– buttons**
Use to set the overall listening volume.

⑲ **REMOTE SETUP button**
Use this button when setting up the remote control to control other components.

Rear Panel



8.2 SPECIFICATIONS

Amplifier Section

Continuous average power output of 100 watts* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.2 % total harmonic distortion (front).**

Continuous Power Output
Front ..... 100 W per channel (1kHz, 1.0 %, 8 Ω)
Center ..... 100 W (1kHz, 1.0 %, 8 Ω)
Surround ..... 100 W per channel (1kHz, 1.0 %, 8 Ω)

Input (Sensitivity/Impedance)
CD, VCR/DVR, CD-R/TAPE/MD, DVD/LD, TV/SAT
..... 200 mV/47 kΩ
Frequency Response
CD, VCR/DVR, CD-R/TAPE/MD, DVD/LD, TV/SAT
..... 5 Hz to 100,000 Hz $^{+0}_{-3}$ dB
Output (Level/Impedance)
VCR/DVR REC, CD-R/TAPE/MD REC
..... 200 mV/2.2 kΩ
Tone Control
BASS ..... ± 6 dB (100 Hz)
TREBLE ..... ± 6 dB (10 kHz)
LOUDNESS ..... +9 dB/+9 dB (100 Hz/10 kHz)

Signal-to-Noise Ratio (IHF, short circuited, A network)
CD, VCR/DVR, CD-R/TAPE/MD, DVD/LD, TV/SAT
..... 96 dB
Signal-to Noise Ratio [EIA, at 1 W (1 kHz)]
CD, VCR/DVR, CD-R/TAPE/MD, DVD/LD, TV/SAT
..... 79 dB

Video Section
Input (Sensitivity/Impedance)
VCR/DVR, DVD/LD, TV/SAT ..... 1 Vp-p/75 Ω
Output (Level/Impedance)
VCR/DVR ..... 1 Vp-p/75 Ω
Frequency Response
VCR/DVR, DVD/LD, TV/SAT → MONITOR
..... 5 Hz to 7 MHz $^{+0}_{-3}$ dB
Signal-to-Noise Ratio ..... 55 dB
Cross Talk ..... 55 dB

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FM Tuner Section
Frequency Range ..... 87.5 MHz to 108 MHz
Usable Sensitivity ..... Mono:13.2 dBf, IHF (1.3 µV/ 75 Ω)
50 dB Quieting Sensitivity ..... Mono: 20.2 dB
Stereo: 38.6 dBf
Signal-to-Noise Ratio ..... Mono: 73 dB (at 85 dBf)
Stereo: 70 dB (at 85 dBf)
Distortion ..... Stereo: 0.5 % (1 kHz)
Alternate Channel Selectivity ..... 60 dB (400 kHz)
Stereo Separation ..... 40 dB (1 kHz)
Frequency Response ..... 30 Hz to 15 kHz (±1 dB)
Antenna Input (DIN) ..... 75 Ω unbalanced

AM Tuner Section
Frequency Range ..... 530 kHz to 1,700 kHz
Sensitivity (IHF, Loop antenna) ..... 350 µV/m
Selectivity ..... 25 dB
Signal-to-Noise Ratio ..... 50 dB
Antenna ..... Loop antenna

Miscellaneous
Power Requirements ..... AC 120 V, 60 Hz
Power Consumption ..... 250 W
In Standby ..... 1 W
AC Outlet ..... 100 W MAX. (SWITCHED)
Dimensions ..... 420 (W) x 158 (H) x 391 (D) mm
(16-9/16 (W) x 6-4/16 (H) x 15-6/16 (D) in.)
Weight (without package) ..... 8.5 kg (18 lb 12 oz)

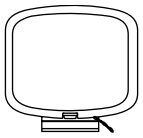
Furnished Parts
AM loop antenna 1
FM wire antenna 1
Dry cell batteries (AA size IEC R6P) 2
Remote control 1
Operating instructions 1

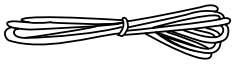
NOTE:
- Specifications and the design are subject to possible modifications without notice, due to improvements.

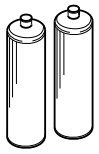
* Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifiers.
** Measured by Audio Spectrum Analyzer.

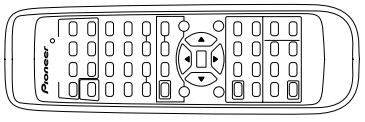
"DTS" and "DTS Digital Surround" are trademarks of Digital Theater Systems, Inc. Manufactured under license from Digital Theater Systems, Inc.

Accessories


AM loop antenna
(ATB7009)


FM wire antenna
(ADH7004)


AA size IEC R6P
Dry cell batteries (x2)


Remote control unit
(AXD7246)